PROCEEDINGS

and

ADDRESSES

of

The American Philosophical Association

1945-1946

VOLUME XIX

of the combined proceedings of the several divisions

Reprinted from THE PHILOSOPHICAL REVIEW, Vol. LV, No. 4, July, 1946

UMI

UMI

THE END OF THE DAY[1]

THE HISTORY of occidental philosophy may be likened to three glorious days, corresponding respectively to ancient, medieval, and modern philosophy, and separated from one another by intervals of night and comparative darkness. We are now apparently witnessing the twilight at the end of the third day, that of modern philosophy.

The dawn of the third day, that of modern philosophy, included portions of the fifteenth and sixteenth centuries, during which the humanists found a way of interpreting the ancient classics which the medieval scholastics had neglected, and proceeded to produce excitingly novel interpretations of the world and man. The hazy sunrise of modern philosophy came toward the close of the sixteenth century, when Giordano Bruno, prompted by the Copernican astronomy, strikingly although confusedly anticipated many of the conclusions which later philosophers were to think out systematically. The early morning of modern philosophy took place within the seventeenth century, beginning with Francis Bacon, trumpeter of his time, who inspired his younger contemporaries with enthusiasm for the advancement of learning through scientific research, and suggested to them a new method of investigation which they, better acquainted with contemporary science than he, supplemented by other and in some respects better methods. As a result Descartes, Hobbes, Spinoza, Leibniz, and others, following in swift succession, developed the first great modern systems.

The late morning of the day of modern philosophy was the brilliant century of the Enlightenment, when Locke, Berkeley,

[1] Presidential Address delivered at the meeting of the Eastern Division of the American Philosophical Association at Sarah Lawrence College, February 22, 1946. As a result of impressions formed at this meeting, the author now believes that the "twilight" period described in this address has already passed, and that the predicted dawn of "Tomorrow" is imminent, if it has not actually arrived.

6000 .1223 v. 19-21 (1945/46-1947/48)

UMI

Hume, Voltaire, Diderot, Rousseau, and many others, mostly British and French philosophers, forever freed the modern mind from the superstitions of all previous European thought, formulated the methods of empiricism, defined the limits of human understanding, emancipated ethics from theology, and established the foundations upon which rest present rights to freedom of thought, speech, and publication, together with religious, political, and social liberties.

After the Enlightenment came high noon, with the immortal critical philosophy of Kant. Early afternoon was attended by the great idealistic systems of Fichte, Schelling, Hegel, and Schopenhauer. During the mid afternoon appeared more German idealists, French eclectics and positivists, British Utilitarians and commonsense philosophers, and our own Concord school. The late afternoon and sunset of modern philosophy witnessed the brilliant philosophical interpretations of evolution, which owed their inspiration to the researches of Laplace, Lamarck, Lyell, and, above all, of Darwin, and in sharp opposition, the certainly not less valuable contributions of the neo-Kantians, neo-Hegelians, and other idealists.

With the close of the nineteenth century, the last rays of the setting sun seem to have disappeared, and to have been followed by the slowly dimming twilight of the present. The five most significant philosophers of the past twenty years, perhaps some of you will agree with me, have been Samuel Alexander, Henri Bergson, John Dewey, George Santayana, and Alfred North Whitehead, all born over eighty years ago. What younger men show promise of becoming their equals?

In sharp contrast to the decline in creative thought in philosophy during the twentieth century, extremely impressive strides have been made every decade in mathematics, physics, chemistry, biology, and psychology, and substantial although less remarkable progress in the social sciences.

This situation perhaps furnishes the principal reason why philosophy appears for some years to have been losing in prestige and popularity. Some of our colleagues in other departments do not believe that we are getting anywhere. Many liberal colleges which

continue to prescribe for all students work in the natural sciences, social sciences, English and foreign languages and literatures, have reduced philosophy to the status of a purely free elective, which a student may select if he wishes, but which is not required nor even recommended. Alarmists fear that philosophy may now be passing through a decline similar to that undergone a generation ago by Greek and Latin, subjects still highly respected by some of the older members of every college faculty, but actually elected each decade by fewer students.

The reason for the contemporary lag in creative contributions to philosophy is, of course, the intricate character of present-day sciences. In former centuries in modern times, every great forward step in philosophy was prompted by a previous advance in the sciences which philosophers knew how to appreciate, and to apply to their own fields of inquiry. Descartes, Leibniz, and many of their contemporaries, were themselves eminent scientists. Locke and Kant were thoroughly familiar with the scientific thought of their times. Darwinian biology was comparatively simple, and hence was adequately understood by the great philosophers of the last century. It will take a longer time for philosophers to assess the metaphysical implications of twentieth-century sciences. Until this has been accomplished the lag in creative thought in philosophy will continue.

While the twentieth century thus far appears to have been one of twilight in philosophy, night at any rate has not arrived. Noteworthy beginnings are being made in the interpretation of the sciences. The new movements in twentieth-century philosophy, such as personal idealism, pragmatism, instrumentalism, new realism, critical new realism, emergent evolutionism, logical positivism, semantics, phenomenology, and others too numerous to mention, all undoubtedly have merits, and some or all of them may ultimately prove to be more significant as lasting contributions to the progress of thought than is now appreciated by any one at present except their respective supporters. It is probably safe to assume that at least some of them—I shall not venture to say which—will prove to be of as much permanent worth as say, contemporary accomplishments in poetry, painting, and theology.

What shall we do in the present situation, at the end of the third day, that of modern philosophy? Well, we should offer what contributions we can to the interpretation of recent sciences from a philosophical point of view. We can also teach our students lessons drawn from the classical heritage of ancient, medieval, and modern philosophy. Boethius was a philosopher who lived in the twilight following the sunset of ancient philosophy. Yet from the philosophers of the past, and from his own reflections, he was able to draw consolation for himself, his contemporaries, and the generations that followed until the dawn of medieval philosophy. We can follow the example of Boethius, and we have a longer and richer heritage from which to draw. We can freshly apply the wisdom of the past to the problems of the present in every field of inquiry and activity in which a broader vision may be of assistance to the specialists in that field. Philosophy, to be sure, is no longer the queen of the sciences, but she is capable of being a fellow worker with them in the pursuit and application of knowledge.

And, whatever we attempt, we must always remember to be magnanimous and not minute philosophers.

The terms "magnanimous" and "minute" will be employed in this address with not precisely the same denotation and connotation which they have in Professor Wilbur Marshall Urban's *The Intelligible World*, from which I have borrowed them.[2]

By a magnanimous philosopher I mean a philosopher who endeavors to be a spectator of all time and existence, an interpreter of humanity and the world in their mutual relationships. He makes this endeavor in order that he may assist his fellow men to recognize truth, to appreciate beauty, to discriminate between good and evil, and to direct their lives accordingly.

The modern magnanimous philosopher respects the sciences, and accepts their established and probable conclusions. To these he daringly adds whatever speculative surmises in regard to metaphysics, art, morality, and religion, appear to him not to be in con-

[2] Urban appropriated the term "minute philosophers" from Berkeley's *Alciphron*. Berkeley himself got it from Cicero. (*Berkeley's Complete Works*, edited by A. C. Fraser, II, 48, footnote 3.) In contrast to "minute" Urban coined "magnanimous" to designate those philosophers who, as Sir Thomas Browne says, have "a sense for the magnalities" (Urban, *op. cit.* 11).

flict with scientific certainties and probabilities, and for other reasons to be at least plausible, even if, by their very nature, they cannot at present or perhaps ever be scientifically proven. A timid philosopher who confined himself to data that can be experimentally tested in laboratories would commit intellectual suicide; for he could offer nothing to the world that scientists cannot state better than he.

A magnanimous philosopher advances his interpretation of life in relation to the world in a hopeful and inspiring manner, calculated to give men confidence in themselves, and to render them useful citizens of the universe. If the known and probable facts seem to him not to prohibit such an interpretation, the magnanimous philosopher will probably be an optimist, but he will not carry optimism to a point that would make human effort at progress appear superfluous because everything in the universe is already absolutely perfect and complete. On the other hand, the interpretation of the magnanimous philosopher may be melioristic: his appraisal of the facts may force him to concede that the world and human society are sadly imperfect; nevertheless he may feel justified in affirming that they are capable of substantial improvement as a result of human initiative. The interpretation of a magnanimous philosopher may even be pessimistic, provided he leaves a place for human endeavor to make conditions at least considerably less bad than they now are. No magnanimous philosopher carries pessimism to the point of saying that all is irreparable futility and frustration, and that man can do nothing to improve anything in any way whatever. The facts certainly are not discouraging enough to force so desperate a conclusion as that.

Even if a philosopher professes to be a skeptic or an agnostic regarding the character of the world as a whole, he may be credited with being at any rate partially magnanimous provided he finds a way to inspire and enable men to realize their capacities and to make their lives more beautiful and good than they now are and to coöperate with their fellows in developing a better society. However, any professed skeptic or agnostic who really does this, actually although perhaps unconsciously, makes some positive affirmations about the world as a whole in relation to humanity

that are encouraging, and that either imply a religion, or a working substitute for a religion, and that express some kind of faith in either the excellence or the possible improvement of things as they are.

A magnanimous philosopher may be an idealist or he may be a materialist. He may be a theist or a pantheist or an atheist. He may be a monist or a pluralist. He may be a rationalist or an empiricist or an instrumentalist. Certain of the types of philosophers mentioned are indeed, in my own opinion at least, more markedly magnanimous than others, but in fairness it must, I think, be conceded that all which is necessary to qualify a philosopher as magnanimous is that his thought be in some sense synoptic, logically consistent and comprehensive, morally inspiring, and aesthetically appreciative, so that it enables men to adopt a constructive attitude toward themselves, their fellow men, and the universe.

None of our colleagues in other departments is going to attempt the task of the magnanimous philosopher. To be sure, the natural sciences broke away from philosophy long ago; the social sciences forsook philosophy during the last century; our separation from psychology and education is now complete. Applied ethics may become largely appropriated by the social sciences, since in social problems the recognition of ultimate values is comparatively simple, and the serious difficulties are found in the selection of effective means for attaining them. Symbolic logic may presently become a separate discipline from philosophy, and may even carry traditional formal and inductive logic away with it. Nevertheless philosophy will always occupy a considerable domain, including at least metaphysics, epistemology, theoretical ethics and aesthetics, and the philosophy of religion. In addition to these subjects, magnanimous philosophers, with their broader and less specialized outlook, will continue to coöperate with the technicians in every field of human inquiry and activity in which adjustments to new situations must be made upon an extensive scale. In every situation involving reflective adjustments, realists, idealists, instrumentalists, and philosophers of every school will be able to offer suggestions. Nothing that is of real human significance, whether

in the realm of pure essences and subsistents, or in that of practical emergencies, can be alien to the interest and sympathy of a magnanimous philosopher.

In contrast to the magnanimous philosopher, a minute philosopher fails to arrive at any constructive interpretation of the world and humanity in their mutual relationships. Even if a philosopher is magnanimous in his own thinking, he may fail to make his constructive outlook intelligible to his students or the readers of his books, and so he may be a minute philosopher so far as his influence upon other persons is concerned.

Among minute philosophers I mean to include those who seek to know more and more about less and less, who confine their attention to trifling problems which throw no light upon any significant aspect of human life or of the world as a whole.

Minute investigations may possibly be of service in purely scientific analyses, for all that I know. However, I suspect that even in a science, dealing with a restricted field of human inquiry, research would hardly be justifiable unless its results were likely to throw light upon some major problem within the science itself. To be sure, a layman cannot always judge whether a piece of research is likely to throw such light. I remember once hearing an eminent biologist deliver a lecture about the markings upon the backs of potato bugs of succeeding generations, which he had been studying patiently for many years. Before he concluded his lecture however, he pointed out that the results of his work suggested important modifications of the then accepted laws of heredity. It thus became evident that, if the laws of heredity needed to be modified as a result of this man's investigations, the outcome might prove momentous for understanding heredity, not only in potato bugs, but in all forms of life, including man. So the implications of research into potato bugs might prove of sweeping significance, not only in biology, but also in the social sciences, and even in philosophy itself.

However there seems to be little justification for any philosopher to conduct investigations analogous to the study of markings upon the backs of potato bugs. No philosopher should attempt to perform tasks which a scientist can do better than he. The work of the

UMI

philosopher is more synthetic than analytic. His vocation is to suggest what light scientific discoveries throw upon our relations to one another and to the universe. Any commendable piece of philosophical investigation ought at least to have genuine human significance, and preferably cosmic implications as well.

Of course it is not to be expected that the bulk of new contributions to philosophical literature will have obvious magnanimous implications of momentous importance. However every philosophical investigation should at least contribute to an understanding of other matters besides those under immediate study.

By means of an illustration, it may become clearer where the precise boundary-line should be drawn between a very modest bit of magnanimous research and an investigation which, although it might take much labor over many years to complete, would nevertheless be worthlessly minute, because it could make no contribution to philosophy or to any other field of profitable human knowledge. It would, I think, be a modest but legitimate object of magnanimous philosophical research to endeavor to determine more precisely than is now probably known how long Locke tutored the future third Earl of Shaftesbury, and what kind of an impression he made upon him: for this might help us better to decide how much influence Locke's empiricism may have had upon the ethical thought of the author of the *Characteristics*, who of course occupies an important place in the history of ethics. On the other hand, it would be an unjustifiably minute piece of research, so far as I can see, to write a long and meticulous account, gathered from diaries, correspondence, and whatever other data may be available, of what Locke said and did every morning, afternoon, and evening of his entire life. For the main facts of Locke's life are already well known, and a minutely elaborate study of this kind could add little or nothing to an understanding of his philosophy, or of its influence upon other thinkers of the Enlightenment.

Now let us look at this method for distinguishing between magnanimity and minuteness in philosophical research with reference to the theses prepared by candidates for the degree of doctor of philosophy.

How many doctors' theses actually illuminate any philosophical

problem of a magnanimous character? Some do, of course. But how many theses are ever actually read by any one except the examiners? Is any graduate student spending his time wisely, if he labors upon a thesis which no one except his examiners will ever read? You may reply that such a student is learning how to carry on research carefully, to document every statement he makes, and to organize his findings in a systematic and intelligible manner. That is all true; and every young person who writes a doctor's thesis ought to receive therefrom a kind of discipline that will make him a better scholar as well as a better teacher during the rest of his life. But if in this, probably his initial piece of serious work, he concentrates upon a problem of little worth, may his teachers not have started him in an entirely wrong direction which in after years will seriously curtail his usefulness as a scholar as well as a teacher, and tend to make him a minute and not a magnanimous philosopher?

Many times when the department of philosophy, in the college with which I have been connected during most of my teaching career, has been looking for a young man to inspire Freshmen and Sophomores with an interest in philosophy, I have received letters from young men who were completing doctor's dissertations upon extremely recondite and, so far as I could judge, utterly useless topics. These young men informed me in their letters that they were seeking employment in some college where they could teach the contents of their theses to undergraduates. What use could an undergraduate college make of such men!

When I was completing my own doctor's thesis—which I personally believe was magnanimous in an extremely modest way—the head of the department recommended me to the President of the university for an instructorship in the department for the succeeding year. The President replied that it would be unwise to appoint one of their own graduates to an instructorship, in which his duty would be to teach undergraduates, immediately after he had received his doctorate, since he would talk completely over the heads of his classes. The President decided that I should teach elsewhere for a year or two until I had forgotten about my thesis, and that after such a time had elapsed I might return and teach in

my alma mater—which after a year's teaching elsewhere I was permitted to do.

It does seem as if graduate schools might do more to prepare their students to teach philosophy to undergraduates than is the present practice. A seminar on the teaching of philosophy has, I believe, occasionally been conducted in a graduate school. A thoroughly organized lecture and discussion course would have been better. Textbooks ought to be written on the subject, as soon as anybody is competent to write them. It is a scandal that men expecting to teach philosophy frequently receive doctorates after having studied almost everything about philosophy except how to teach it. May this not be another reason why philosophy has been losing in popularity in liberal colleges,—because elementary courses are too often conducted by instructors who do not know how to teach philosophy effectively?

Perhaps it will be replied that it is the business of a professional school merely to teach theoretical principles, and that its students must after graduation learn how to practice in the profession. Medical students learn after graduation to practice medicine by serving as interns in hospitals. Law graduates learn to practice law by serving as clerks in lawyers' offices. Yet medical students while in school attend clinics. Law students in moot courts get at least some glimmerings of what it will be like to plead cases before a judge. Medical and law schools do at least a little to prepare their students for their lifework.

You may ask whether professors in undergraduate liberal colleges may not themselves be in part to blame for the slowness with which young doctors learn to teach philosophy effectively. Have the older men in liberal college departments done as much as they should to select competent men for instructorships; and after appointments have been made have they given their younger colleagues sufficient supervision and guidance?

The problem of selection is difficult. Professors in graduate schools can, it has been my experience, be relied upon to report accurately regarding the scholarship and intellectual promise of the men whom they recommend for teaching positions. On the other hand, many such professors do not seem to be very good judges of

UMI

the personalities of the men whom they recommend, so far as their teaching capacities are concerned; so that such information has to be obtained in some other and not very reliable manner, like personal interviews. I sometimes wonder if it would not be worth while to investigate the undergraduate careers of candidates for instructorships. A man who while in college belonged to a social fraternity or club, or was prominent in student activities, might prove more effective as a teacher than a man of equal scholarly accomplishments who did not have much social contact with his fellow undergraduates. Again, a man who had been employed in an activity like business or industry or agriculture or journalism or military service, a man who during his life had done something else besides study and teach, might prove more likely to meet the majority of his students upon common ground in a philosophy classroom.

Should the older men in a department of philosophy give the young instructors more supervision and guidance? It is my own personal opinion that those teaching philosophy for the first time should serve as apprentices to the older men in the department. The trouble with such a policy, however, would be that young instructors often resent tutelage. Even the advice of older men frequently makes little impression upon them. They insist upon freedom to make their own mistakes and to learn by the slow method of trial and error, costly to themselves as well as to the institution which employs them. This would not so often be the situation if a course in the Pedagogy of Philosophy during their graduate studies had previously awakened them to some appreciation of the difficulties which they will meet when they first teach philosophy to undergraduates.

The topics covered in a course in the Pedagogy of Philosophy might include a consideration of the different techniques of conducting a class exercise, whether as a lecture, recitation, or discussion; how to organize the subject-matter of a course; how to select textbooks and assign collateral readings; how to prepare and grade essay and objective examinations; and, in general, how to make courses at once interesting and instructive, conserving the time and energy of students, guiding their efforts into the most profitable directions and yet leaving them freedom of initiative in

UMI

their work and respecting their personalities. Some of the peculiar problems of an instructor might also be considered: for instance, how to describe an elective course in the college catalogue so that it will attract students and yet not meet with the disapproval of colleagues; how to exercise the right to freedom of teaching, and yet avoid becoming a nuisance to the college administration. The main purpose of the course in the Pedagogy of Philosophy should be to give the graduate student some appreciation of the kinds of problems which he will have to meet in his future vocation, and prevent him from becoming totally absorbed with subjects which he probably will never have occasion to present to a class.

Let us now consider more specifically who are or have been magnanimous and who minute philosophers.

All of the great figures in the history of philosophy seem to have been magnanimous philosophers, most of the pre-Socratic philosophers certainly, as well as Socrates, Plato, Aristotle, Epicurus, the greater Stoics, the principal figures of medieval philosophy down to the fourteenth century with St. Thomas as the foremost and not excluding Abelard, quibbler at times though he was. In the history of modern philosophy every man about whom an ordinary elementary text would devote more than a page or two was a magnanimous philosopher. This probably every one would concede to be true in the cases of such broadminded constructive thinkers as Descartes, Hobbes, Spinoza, Leibniz, Locke, and Berkeley.

There might be some question about Hume, who professed to be a skeptic. Yet Hume was affirmative enough in his endeavor to introduce the experimental method of reasoning into moral subjects. Although he refused to believe in miracles and a particular Providence, in which denials most philosophers since his time have agreed with him, he did believe in moral responsibility, sympathy, the moral sense, and utility in the best sense of the word. He was keenly alive to social relationships. He was accurate in historical interpretation. No one could have become a disciple of Hume, and not have been a person with constructive social ideals. Expositors of Hume should indicate the constructive aspects of his philosophy,

and not present him merely as the devastating skeptic whom Kant apparently supposed him to be.

Many of you probably reject some of the doctrines of Kant, Fichte, Schelling, and Hegel. Some of you may believe that they, although possibly unintentionally, did much to prepare the German mind for the advent of Hitler. Nevertheless all of them taught their students to respect the personal dignity of every individual, to acknowledge the importance of humanity and its solidarity with the universe, and to be conscious of their own opportunities and responsibilities as scholars.

Auguste Comte, the Utilitarians, and Herbert Spencer, although not in agreement with the theologians of their times, yet in their own ways knitted the natural and social sciences together, and urged upon every person to coöperate with his fellows in the effort to produce a better society, in which, as Bentham expressed it, everybody would count for one and nobody for more than one. They, surely, were magnanimous philosophers.

But what of Schopenhauer and Nietzsche? They appear to have been magnanimous philosophers in some, although not in all respects. Schopenhauer's type of pessimism, to be sure, is not magnanimous; but this seems to have been due to an individual idiosyncrasy in a neurotic temperament, and to be a wholly accidental detail in a brilliant system of voluntaristic idealism, which with the pessimism eliminated would have been as magnanimous as the systems of Leibniz and Fichte. Nietzsche's doctrine of eternal recurrence and the occasional passages in his writings in which he makes truth and goodness unqualifiedly relativistic are not magnanimous. On the other hand, his early justification of the world because of its aesthetic values, and his later desire to bring about a transvaluation of all values in which supermen will appear who will be as much beyond man as man is beyond the ape, are certainly magnanimous at least in intention. We cannot exclude Nietzsche from the magnanimous philosophers merely because he did not believe in democracy, unless we also exclude such aristocratic thinkers as Plato and Aristotle. Any philosopher, no matter how much mistaken, is none the less magnanimous in intention so far as he

UMI

aims to uplift humanity to a higher level of aspiration and achievement; and Nietzsche on the whole was endeavoring to do that.

The absolute idealists were truly magnanimous philosophers. They sought to make man confident of his nature and destiny by showing that he is organic with his fellow men and the Absolute, and by assuring him that since all that seems awry in time has already been reconciled in the Absolute, he can with confidence advance to put to right wrongs in the temporal world of appearance. It is utterly unfair for the critics of absolute idealism to accuse the school of indifference to social evils merely because the ill health of Bradley did not permit him to take an active part in efforts at social amelioration, although T. H. Green and Bosanquet did so. It is equally unfair to accuse pragmatists of indifference to social matters merely because James and Schiller did not write a great deal on such subjects or frequently visit social settlements, forgetting that Dewey's chief concern has been for social betterment. Absolute idealists and pragmatists have alike been magnanimous philosophers, although it may be that the one school with its assurance of the Absolute has tended too much in the direction of quietism, while the other school has inclined to make all life and existence too precarious and unstable, and has not been altogether consistent in urging men to progress without setting up any definite goals to guide them in their efforts. No school has been perfect in all respects; but every philosophy that attempts to make a synthesis in which men will be in harmony with one another and with the universe is magnanimous at least in its intention, and likely on the whole to be so in its performance.

It is unnecessary to defend the magnanimity of the personal idealists because so far as I am aware no one ever questions it.

When, over thirty years ago, the American new realists published their famous *Platform*, it seemed to many of us that this new school was concentrating upon sterile technicalities which in the language of the present address should be denominated minute. As the realistic movement has since developed, however, it has become clear that virtually all of the new realists, as well as critical new realists and emergent evolutionists, who have given expression to their metaphysical views are magnanimous philosophers of the

UMI

very first order. The same is true of the phenomenologists.

What shall we say regarding contemporary logical positivism? The forerunners of this school, like Hume, Comte, Mill, and Santayana, have on the whole been markedly magnanimous. Whether the same can be said of all of the younger logical positivists of our own generation is still uncertain. It may prove true that these logical positivists, like the new realists, will in the end, after they have developed their views more fully, prove to be magnanimous philosophers. To be sure, if they permanently confine themselves to mere negations in metaphysics and other fields they will prove to be minute philosophers. On the other hand, if they can show that their position has really constructive implications for thought and action they will deserve to be classified among the magnanimous philosophers.

Are such subjects as symbolic logic, logical syntax, and the philosophy of language, magnanimous or are they minute? So far as they furnish fresh light upon human and cosmic relationships they are of course magnanimous. So far as they fail to throw such light they are minute. Possibly, as was the case with studies in value theory some years ago, they are illuminating until they are carried to a certain optimum point, and rapidly become sterile when carried further. In other words, when prosecuted beyond a definable limit, they may be subject to a law of diminishing returns in magnanimity. The optimum point may well be different for advanced students from what it is for undergraduates. Only provided that a philosophical subject actually enables students to think more effectively in the conduct of their lives, can it be magnanimous for them. In these days no subject probably deserves inclusion in the curriculum if its alleged value is nothing more than that of a purely formal discipline.

Since, then, nearly all of the eminent philosophers of the past and present are magnanimous philosophers, who are left to be denominated minute philosophers?

Those philosophers who seem justifiably to be classified as minute, fall, I think, under four general types, which may be roughly designated as triflers, cranks, debunkers, and pedants.

First, those whom Cicero chiefly had in mind, and Berkeley in

UMI

large part, were triflers who had picked up catch philosophical phrases in idle discussions which they fancied justified them in leading lives of slothfulness and dissipation, and in evading any serious responsibilities in the conduct of life. While Epicurus himself had been a constructive thinker and a responsible man, some of the Roman contemporaries of Cicero lost sight of the affirmative implications in the philosophy of Epicurus, and exaggerated its negative aspects out of all proportion to their real significance. While the modern world owes an immense debt to the free thinkers of the Enlightenment, there were idlers in the coffee shops in Berkeley's time who apparently fancied that "freedom of thought" implies unrestrained license in conduct. Similarly, in our own time, there are men who study philosophy sufficiently only to find out that comparatively few living philosophers believe either in orthodox theology or in absolutism in ethics. These superficial students of contemporary philosophy then jump to the conclusion that there are no principles of truth and morality at all by which any one need feel himself bound in any manner whatever. It is improbable that many men of this type hold academic chairs in departments of philosophy. However, some of them acquire notoriety as journalists and popular speakers.

The second type of minute philosophers, the cranks, are persons who, after a little superficial reading, probably in popular scientific or philosophical treatises which they misunderstand, publish books or articles or deliver lectures in which they make pretentious claims. Under this type may be included some people who read a little Hindu philosophy, or even visit India, and convince themselves and try to persuade others that they have found out how to solve all of the secrets of the universe, and to become mighty seers, prodigies in mental strength and efficiency. Such minute philosophers probably are more often self deluded than they are wilful charlatans. They exercise little influence except upon the ignorant and credulous. Now that philosophy is in a twilight period, and lacks prestige, we are not likely to be annoyed so much by this type of thinkers as are our more popular colleagues, the psychologists.

Of more serious concern to us than either of the two types of

UMI

minute philosophers mentioned is the third type, the debunkers. A debunker has no comprehensive philosophy of life to illuminate his own thinking or with which to inspire others. Such a man, if he teaches the history of philosophy, concentrates his attention and that of his class almost entirely upon the errors and inconsistencies of whatever great philosopher happens to be under consideration, and fails either himself to see, or to enable his students to appreciate, the constructive achievements of the philosopher studied. In his discussion of Descartes, for instance, a debunker probably begins by calling the attention of his class to the fact that Descartes argued in a circle, because he attempted by his rationalistic method to prove the existence of God, and then proceeded to deduce from the existence of God a guarantee of the validity of rationalism. The debunker finally professes to expose the complete futility of Descartes as a philosopher by calling attention to his error in finding the seat of the soul in the pineal gland. So the debunker and his class decide that Descartes was a great fool. The debunker then goes down through the entire history of modern philosophy exaggerating the mistakes and inconsistencies in the thought of every philosopher studied, and giving none of them credit for any real contributions. The debunker has no constructive philosophy of his own to offer to the class in substitution for those of the classical philosophers. At the end of the course, his students may come to the conclusion that the course has been a sheer waste of time, since none of the philosophers studied knew anything at all. Or, if their instructor was clever and entertaining enough, his class may have enjoyed his debunking, and feel quite sophisticated in consequence. In after years they may occasionally read a book on philosophy in order to enjoy the pleasure of picking it to pieces. On the other hand, some of the members of such a class may feel sadly disillusioned; they have lost all confidence in whatever moral and religious beliefs they formerly had, and they have acquired no working philosophy of life with which to replace this loss. I have chosen the history of philosophy as an illustration of the operations of the debunker, but of course he is liable to be found at work in other fields as well.

The fourth type of minute philosophers, the pedants, are more

UMI

often found among professional philosophers than any of the other three types mentioned. The pedant is a very serious student of philosophy, and entirely sincere in his devotion to it. He is usually, I suspect, a man who has led the secluded life of a scholar, and never had many social contacts. In consequence, he has become utterly absorbed in his own studies, which have become increasingly technical in character. In his publications he makes subtle distinctions which are difficult even for his fellow philosophers to discriminate, and which, so far as they can judge, are of little or no consequence. As a teacher he discourses in a vocabulary which his classes do not understand, and expounds erudite subjects which they find exceedingly dull. He may defend his pedantry by citing the writings of magnanimous philosophers like Kant and Hegel, who at times were addicted to pedantry, failing to realize that it is impossible to acquire the virtues of a great philosopher by copying his vices.

Elementary logic is the subject in which pedantry is most in evidence. Elementary logic, taught in the right way, should become the best course in general education in the entire curriculum. It is a subject of prime importance. Whatever a person may do, whether in college or in later life, he needs to know how to think straight, to examine evidence, to make correct deductions from known principles, and to arrive at accurate generalizations inductively. Most of the blunders made by individuals and by nations have been the product of inaccurate thinking, as in the case of the perpetrators of the second World War. All great achievements have been the outcome of right thinking. Properly taught, elementary logic should be the most popular as well as the most useful subject taught in a liberal college.

Such would be the actual situation, if only attention in this course were, not merely in part, but wholly and entirely, concentrated upon those methods of ascertaining truth and detecting error which a student can readily learn to employ intelligently in all of his thinking upon all topics whatsoever during the time that he is taking the course, and which in after years he will continue to use, and never forget any more than he forgets the multiplication table in arithmetic. What text in elementary logic now exists,

UMI

which really achieves this purpose? I know of none, although several approximate it to some extent, and elementary logic is unquestionably far better taught than it was fifty years ago. However, the prevailing tendency, both in the composition of texts and in teaching the subject to classes, is to concentrate to a considerable extent upon technical processes which a student never consciously employs except in his assignments in the course, and which he speedily forgets as soon as the course is completed. It is a notorious fact that elementary logic, as usually taught upon the undergraduate level, has very little correlation even with the other courses that make up the requirements for a major in philosophy, and almost none at all with other college courses or with thinking and reading in general. These faults can be completely remedied only by an entire reorganization of the contents of the course and a modification of the methods by which it is taught. Teachers who are magnanimous in the presentation of other topics should not become minute philosophers when they teach elementary logic. Do not misunderstand me. I recognize that elementary logic, as now taught, is a moderately interesting and profitable undergraduate course. I merely claim that it could become a far better course if pedantry could be eliminated from it entirely.

Our main concern, therefore, should be to cultivate magnanimity in our thinking, our writing, and our teaching. Each of us should have his own constructive philosophy of life, and know how to communicate it to others intelligibly and interestingly.

The world, in these troubled times, needs the inspiration and guidance of philosophers as much as it ever has at any time in the past. Of this need the general public is aware. Magnanimous popular books, like Durant's *Story of Philosophy*, and Lippmann's *Preface to Morals*, have been widely read. Jowett's translations of the *Dialogues of Plato* have appeared in large popular editions. Other meritorious popular books have been well received. More such books should be published. Textbooks should be more carefully prepared, and editors and reviewers should give them more serious attention when they appear. Books of selections from sources should be edited with the greatest pains, in order to render them interesting and intelligible. Worthy of emulation is the practice of

UMI

editors like Clark and Smith in *Readings in Ethics* and Castell in *An Introduction to Philosophy*. They have freely rearranged passages from classical philosophers in a more concise and logical order, so that the thought of a philosopher, stated in his own words, becomes clear to the beginner to an extent that would have been impossible without editorial rearrangement. Philosophers have much to offer to the world, even in an era of twilight, and if we can supply it to the public and to our classes in a presentable manner it will be gladly received.

We have thus far been considering the outlook for philosophy upon the hypothesis that we are now in an era of twilight. Let us now take into view a more hopeful alternative possibility. Let us suppose that, instead of twilight, we are merely in a period of passing clouds that will shortly be followed by glorious sunlight. Since, in the previous history of modern thought, new philosophical advances have rapidly followed scientific discoveries, it may not be long before philosophers catch up with the scientists again, and elaborate systems that will be more valuable than any which the past has known, because they will be based upon more accurate and extensive scientific knowledge. Some progress in this direction has already been made. Furthermore, philosophers are now studying the function of philosophy in general education more thoroughly than ever has been done in the past, and in consequence we may expect that improved teaching techniques will shortly come into general practice. Every philosopher may soon become a magnanimous philosopher both in his writing and his teaching.

We might feel more confidence in this more hopeful hypothesis, so far as original contributions are concerned, if more men were now entering philosophy who have had a large amount of training in the natural sciences. Unfortunately, most young philosophers whom I have known in recent years are better acquainted with the humanities and the social sciences than with the natural sciences. It will only be men who have had an unusual amount of training in these last who will be likely to be able to take the initiative in developing the implications of recent scientific discoveries for philosophy. The present tendency to align philosophy either with the humanities or else with the social sciences in divisions in the or-

UMI

ganization of college and university faculties may be tending to keep us out of contact with students specializing in the natural sciences, with the result that students well grounded in these last subjects are less likely to be attracted to philosophy as a profession. Perhaps some way can be found to correct this situation.

However, one of the greatest contemporary philosophers has come to us with previous scientific training. I refer of course to Alfred North Whitehead. It is quite possible that his admirers are right in believing that his work will inaugurate a new period of great philosophical achievement. If so, it is probable that the most valuable contribution that any one will make to philosophy within the next decade or two will be a two-volume commentary upon the philosophy of Whitehead, comparable to that which Edward Caird wrote upon the philosophy of Kant. Only after Caird's brilliant exposition, and the interpretations of others following him, was the real significance of Kant understood, at least within the English-speaking world. Hegel was appreciated only after similar expositions of his philosophy had appeared. Whitehead, although he writes in English, uses a novel vocabulary, and is not easier to understand than Kant and Hegel. Only after exhaustive commentaries on Whitehead have appeared will the majority of philosophers be able to understand him adequately. When they have become enabled to do so, they may discover that the philosophy of Whitehead really marks the sunrise of Tomorrow, a sunrise just now obscured by clouds which the work of the commentators will clear away.

And, of course, it may be that not Whitehead, but some overlooked Spinoza, has been among us, and has advanced a great philosophical interpretation whose importance a future Lessing will sometime discover and reveal to the world. Or, possibly, among our number is some modest and retiring philosopher, now thirty or forty years old, who is patiently working upon a treatise, which, following the examples of Locke and Kant, he will publish when he reaches the age of fifty-seven. When his book at last appears, perhaps it will become as important for the progress of philosophy, as the *Essay on the Human Understanding* and the *Critique of Pure Reason* proved to be.

UMI

Furthermore, I am told, in physics during the last few years great simplifications have been effected in fundamental conceptions, which are going to make it easier for philosophers to derive from this science whatever implications are likely to be significant for metaphysics. Perhaps similar simplifications may presently come within the other sciences. In restricted fields philosophers are already interpreting recent scientific thought successfully. So there are some grounds for expecting that, before many years elapse, metaphysicians of the first order will appear who will be comparable with the great classical philosophers in genius, and will surpass them in knowledge.

At any rate, let us be magnanimous in research and in teaching. Let our more brilliant thinkers interpret the recent scientific discoveries from a philosophical standpoint as well as they can, and be boldly adventurous in their speculations. Those of us who are not original thinkers can at least keep our torches burning, and illuminate the contemporary obscurity with light from the classical heritage. And it is not necessarily true that even a philosophical twilight must be followed by a long night. June nights are very short in the higher latitudes. Possibly Tomorrow is already close at hand. Let us work courageously and confidently until the dawn of another day shall break, and the shadows flee away.

WILLIAM KELLEY WRIGHT

Dartmouth College

UMI

CONFLICT[1]

THAT violence breeds violence is not a new discovery. Even Thucydides was not the first to observe that wars, which sometimes exhaust some oppositions between peoples, are likely also to generate new antagonisms and severer ones; and the history of our kind has yielded much melancholy confirmation of his opinion. Many people expected consequences of this sort from the war whose clangor still echoes in our ears. But few expected that the resultant tensions would be anything like as menacing as they have been rendered by the invention of explosives which exceed the destructive force of TNT not by a factor of 2, or of 10, or even of 100, but by a factor approaching 1,750,000 pound for pound. It is not hysterical rhetoric but the soberest of facts that leads us to recognize the probability that unless effective international control is achieved within ten or twenty years several nations will possess large stocks of devices by which they could shatter and roast to death, within an hour or so, half the population of a country like ours besides obliterating its cities. And if (as seems, fortunately, doubtful) means should be discovered to confine close to the surface of the earth the flow of radioactive gases released by the explosion of these instruments, their horrible (and in many cases lingering) destructiveness would be further multiplied. The problems which consequently face us are not new in kind; but the increase in their intensity and urgency is staggering. The word is on the lips of every responsible man and woman that we human beings, hundreds of millions of us and of many nations, must either find ways to resolve our major disagreements effectively, and pretty quickly, or we shall very probably soon destroy ourselves.

Whatever hopes men have been able to keep alive in the face of

[1] The presidential address delivered during the Nineteenth Annual Meeting of the Pacific Division of the American Philosophical Association, on December 28, 1945.

UMI

the vicious circles—the accelerating chain-reactions—of conflict and violence, have had as one of their chief sources the faith (at least as ancient as Thucydides' observation and notably expressed by his fellow Greeks) that the most effective way to deal with human conflicts is to reason them out: to settle them rationally (as the phrase goes) rather than by force and violence. And of all men it has been those called philosophers who have most resolutely professed this faith in λόγος εἰρηνοποιός καὶ εἰρηνοφύλαξ. In varying idioms Plato and Aristotle, Spinoza and Kant and Stuart Mill, James and Royce, have expounded it; and upon various grounds defended it. Recently a revered member of our Association wrote: "Philosophy is the attempt of any period to understand what the men of that period are fighting about. Fighting is the attempt to solve problems without understanding them; while philosophy tries to solve the same problems by understanding them. Men fight *only* when they have not understood their differences. We resort to force only when we are unwilling to think issues through."

Yet at the present time when the need to handle disagreements effectively and fruitfully is very great, we find a widespread and extreme disillusionment, not only about the ability of men to resolve by reason their practical conflicts, but even about their ability thus to resolve basic theoretical oppositions. And the disillusionment is not merely wilful cynicism. For an immense deal of activity, called reason in one sense or another, has gone on in the world during the last century. Yet at the same time practical conflicts have grown fiercer and more destructive. And peoples, who are by no means hordes of ignoramuses, but who have been preeminent in intellectual powers and in their recognized achievements in the sciences, in history, in theology, in mathematics and logic, in some of the arts, and in what is generally regarded as philosophy, have done as much to initiate wars, and have gloried in violence at least as heartily, as any other peoples have ever been known to do.

Also, during the last half-century psychologists have discovered much about the motives that operate when we engage in rational explanation, and about the respects in which our theoretical constructs are masked compensations or substitutions, or even escapes from actually struggling with problems which are difficult but

biologically and psychologically urgent. Anthropology and history have shown us that whenever a people's received legend of its principles and purposes is at odds with its obvious practices, we can rely upon some of its thinkers to reason out a myth which will seem to reconcile the discrepant factors. Merely to utter the word "ideology" is to remind ourselves of the aura (large or small) of fictions which surrounds the work and life of men in all the societies historians have studied. And it was Spinoza, let us remember, not some contemporary cynic, who argued that Peter's opinions about Paul will always reflect the disposition of Peter more largely than they will describe the traits of Paul.

Such revelations made by recent work in psychology and anthropology and history, while not as revolutionary as many claim, are nevertheless of an importance which philosophers will be the last to deny. But we must notice two things. (1) Psychologists and anthropologists have *themselves used and exhibited well-recognized procedures of science and of logic* in establishing the respects in which many of our theoretical constructions are rationalized projections or maskings of our interests, rather than fair reports of the materials they purport to describe or explain. And (2), precisely so far as such students have established that theories are thus rationalizations, they have put themselves (and also the rest of us) in a position to distinguish in those theories what part is a fairly probable report of the subject-materials and of their found or inferred relations to their constituents and to various features of their contexts, and what part is some sort of masked expression of our hopes and interests.

Thus even when the debunking effect of psychological and sociological criticism is given the fullest weight, the result would seem to be that the procedures rather loosely designated by the term "reason" are still the best methods we have, not only to achieve understanding and explanation of the processes of nature and of history generally, but also to understand and overcome disagreements about what men's interests in fact are, and what in fact the influence is which those interests exert upon their beliefs. To be sure, such procedures, so far as they reflect conflicting emotions, may not be able to resolve the very antagonisms which they

UMI

reflect; but the history of scientific study suggests that the procedures are capable of resolving theoretical conflicts, and thereby of helping to remove at least such disagreements of attitude as may depend upon disagreements in belief.

But here we have to reckon with a new factor with which, as philosophers, we are perhaps most closely concerned; namely: the notion that reason can no more resolve theoretical conflicts than it can practical, because in its most thorough-going development—in its philosophic reaches—reason characteristically generates *conflicting alternatives of explanation or interpretation.*

Now I am oldfashioned enough to believe that there was, and still is, precious insight in the ancient faith in reason as the resolver of conflicts—indeed, that this ancient faith is more fully defensible than we have ever generally realized. And I believe that the current eclipse of reason's reputation—so widely heralded and so loudly lamented—is largely a reaction against exaggerated and romantic claims made on behalf of reason by such of its careless friends as have allowed enthusiasm to crowd out, or to fog over, the painstaking discrimination of the kinds of activity meant by "reason", of some of the main kinds of human conflict, and a consequent satisfactory interpretation of which sorts of conflict reason may be expected to resolve, and which not.

I therefore invite you to consider to-night whether various procedures, well known to us all under the name "reason", are not altogether capable of resolving theoretical conflicts, and hence of contributing greatly also to the resolution of practical conflicts wherever such conflicts rise between persons, or groups of persons, who share some basic preferences—such as those for life over death and for health over disease. And further whether it is not the work of reason, and nothing else known to us, which promises to show us how we can, if we will, condition more and more human beings to hold and to share such preferences.

It will therefore be useful to recall some—I do not pretend they are all—of the kinds of activity we commonly discuss as the work of Reason.

I. Science—the exploring of events in the world outside our bodies and inside them, with their qualities and relations; the

UMI

search for similarities and differences and for correlations between transactions of one kind and transactions of other kinds. Such work prompts us to expect further instances of, or approximations to, the correlations which are often manifested or approached. But nothing in the procedures of science ever allows us to say that we know for certain that such further instances have occurred, are occurring, or will occur. Of our best hypotheses, dignified by the title of laws, we can never say that it is impossible that there are, or will be, exceptions to them—indeed, that from now on there may be nothing else but exceptions and no more confirming instances at all. Yet we have no better justified method for developing and supporting beliefs about unexplored areas of existence—past, present, or future, fine-scale or large-scale—than those procedures of science. For beliefs so developed have betrayed us less often than beliefs developed in any other way, and also the method supplies the fullest possible opportunity for the alteration of beliefs with enlargement of experience and extension of evidence.

Some indeed advise us that history, social studies, the fine arts, require—and also supply us with the basis for—a kind of explanation different from the scientific and even antithetic to it. To be sure one may best form hypotheses about an historical epoch or transaction, not by manipulating statistics but by immersing oneself in the relevant documents, monuments, literary materials, plays, diaries, conversations, and then formulating one's intuitive and imaginative sense of the structure and quality of what went on, or is going on, or will probably occur. Similarly one achieves comprehension of a person not merely by listing indexes of reaction-times, thresholds, predominant Gestalten, etc., etc., but largely by living and working and talking with him. But these perfectly familiar facts do not in any way remove us from the orbit of scientific procedure. Natural scientists themselves regularly develop hypotheses intuitively and imaginatively. But once an hypothesis is thus developed, whether in history or in physics or in geology, we have no serious way to confirm it except by examining further materials—documents, rocks, paintings, buildings, pieces of sculpture, traces in cloud-chambers, sayings or doings of persons—to see whether these are as they probably would be if

our hypothesis were correct. Neither in history nor in physics can a man satisfactorily ground, or confirm, hypotheses by telling us that he has imagined them very vividly, feels the greatest confidence in them, or has a compelling intuition of their truth. People have told us all these things (and with complete sincerity) in support of such hypotheses as that the earth is flat and is absolutely at rest, that heretics should be burned and witches pressed to death, or that they were themselves the master race, charged by destiny with the duty to control and exploit the rest of mankind.

II. Reason in a second sense, as logic and mathematics, does indeed give us a kind of necessary truths, of undeniable (or perhaps we should better say unrejectable) formulations. For—to take the very simplest instance—wherever any symbol means anything more than nothing and less than everything, that is whenever any entity or class of entities functions as a symbol at all, a formal structure of symbolizing is entailed, a structure which we try to intimate (and to guide ourselves in using) by means of rules and systems of mathematics and logic. It is impossible (to illustrate by this simplest of instances) that any entity should belong to the class named by a symbol if it does not have the characteristics connoted by that symbol; and necessary that it should so belong if it does have the character thus meant. But all who so distinguish formal logical (or mathematical) necessity and impossibility from mere factual occurrences and non-occurrences are agreed that logic and mathematics as such can give us no knowledge and no probability with respect to what has gone on in any universe, or is going on, or will go on; although without the analyses and techniques of logic and mathematics, science as now developed would exceed the powers of any men known to us.

III. Such philosophical work as the analysis, and if justified the distinction, of logic and mathematics from scientific explanation, is work different from either logic or science as these are generally understood; though of course there is no theoretical reason (but only the limits of men's time and energy and capacity) to prevent scientists and mathematicians from doing such philosophical work as we may thus designate Reason in sense III; as there is no theoretical reason why geologists and historians should not also be

quite as expert mathematicians as any mathematician, and vice versa.

IV. There is still a fourth widely used and important sense of "reason", in which we say that a reasonable man is one who appreciates science and logic and philosophy, and also the arts and techniques by which men may progressively satisfy their basic needs for food and health and love and imaginative play, as well as their curiosity. A man reasonable in this fourth sense will form his opinions upon evidence, or at least alter them as he finds things other than he had supposed—will be open-minded, cooperative, and friendly because otherwise (among other grounds) no headway could be made in the work of Reason in senses I or II or III. When we say that science and logic and philosophy are good—when we approve reason in these three senses—we are I think expressing such attitudes as make up what is meant by Reason in this fourth sense—and not merely expressing knowledge of facts, or necessities of logic, or theoretic philosophical insights. For two men might be equally masters of science and history and logic—theoretically, each might know all that can be known and harbor not one difference of belief from the other—and yet one might come to hate all these and desire the annihilation of such activities of reason and also the annihilation of his companion and himself, while the other might approve all these works of reason and all the persons who take part in them. For there is, as Spinoza held,[2] nothing whatever which cannot equally be loved or hated, either one—nothing whatever except only that substance or God or nature of which the love is identical with adequate knowledge, and of which *no mode, no person*, but only substance or God or nature itself, can have such adequate knowledge, since that knowledge is absolutely all of God's infinite modifications as they are under the infinite attribute of thought.

My suggestion to-night is the familiar one that so far as we are in earnest with reason in the first three senses just distinguished, or even in the first two senses, conflicts in belief—theoretical oppositions—literally cannot survive. Our Greek spiritual ancestors and the dominant tradition of our philosophy are thus far

[2] *Ethica*, III, Prop. 15 et Cor., Prop. 51; IV, Prop. 8.

right, that reason can indeed resolve one immense area of conflict—conflicts in beliefs. But such achievement of theoretical accord cannot be said either strictly to entail, or automatically to carry with it in fact, the disappearance of practical oppositions: of differences and antagonisms of attitude. However, it may do an immense deal —and in many cases it may do quite enough—towards removing such differences. For whenever, for example, human beings are agreed in fundamental attitudes of approving life over death and health over disease for themselves and their children and their friends, their practical differences may reflect nothing but opposed beliefs as to the likeliest means to secure or enhance what they thus approve. And if it can, for example, be shown to be predominantly probable as belief, that a growing cooperation of peoples generally is the surest way to those fundamental (though not absolute) ends, the practical conflicts and tensions of such people as agree in approving these ends should so far approach resolution.

But have we claimed too much? When men differ in beliefs—not merely as thinking about different materials but as holding opinions which are mutually incompatible—is it really satisfactory to say that, whatever else they may be doing they are not doing the work of reason, not thinking scientifically, or as logicians or mathematicians, or as philosophers? In particular have we neglected grounds that would justify the belief (fashionable at the present time) that philosophy as such, when prosecuted with vigor and imagination, characteristically develops alternative and conflicting explanatory systems?

Certainly the familiar suggestion of which I have reminded you is confronted immediately by thousands of instances of what seem to be lively theoretical conflicts among the opinions of accomplished scientists, physicians, economists, historians, statesmen and philosophers. Let us examine a few samples.

Many people—psychologists and others—have felt that there is a basic conflict between (on the one hand) the whole enterprise of stimulus-response explanation of human or animal behavior, as against (on the other hand) dynamic-field theories. Yet it is plain that no serious student of stimulus-response patterns is excluded from recognizing the correlations with sorts of stimuli, and the cor-

relations with sorts of responses, of ***any*** factors whatever, external or internal, which are found in ***any way*** to influence, or to be significantly related to, varying stimuli and varying responses. And nothing in stimulus-response investigation prevents any student from being prompted to look for such factors by his feel for the direction of complex processes, his sense of dynamic continuities, his intuition, or any other factor that may operate in (or on) the experience of *any* inquirer. Not only is the student of stimulus and response not excluded from finding and reporting, or from supposing, anything that *anybody* can find or suppose about such factors, but one discovers Pavlov himself studying in great detail such interrelations of factors within and without neural processes, and specifying the respects in which the fusion and synthesis of the factors culminate in effects quite different from any simple-minded mechanical repetition.[3] And just how different, and in what ways? Precisely as different as they may be found, or inferred (with support of serious induction) to be; but ***not*** different as, or because, some prior mechanistic postulate or field postulate entails differences. On the other hand, Köhler in his *Dynamics in Psychology* can say no more in explanation or support of his thesis that "a theory of perception must be a field theory", than that "the neural functions and processes with which the perceptual facts are associated in each case are located in a continuous medium; and the events in one part of this medium influence the events in other regions in a way that depends directly on the properties of both in their relation to each other".[4] We must dare the postulate, "that as a dynamic agent it [the percept] extends into the surrounding tissue".[5] Well, Pavlov had not merely dared a postulate but had actually traced out a few of the ways in which neural processes are influenced by events in their fields; and he thus gave the only kind of serious support relevant to this section of Köhler's field theory. Can we say that Pavlov must therefore have abandoned stimulus-response investigation and become a field-theorist? Only if the price of adopting an ism in psychology is to abandon intelligence!

[3] I. P. Pavlov, *Conditioned Reflexes*, Oxford Press, 1927, p. 148 and elsewhere.
[4] New York, 1940, p. 55.
[5] Ibid. p. 66.

And that price Pavlov was evidently not disposed to pay. Why should any thinker imagine he has to pay it?

The discovery of some limited regularities of stimulus and response is not, and could not be, incompatible with the occurrence or with the discovery of variations in both, either (so far as we may know) spontaneous, or fairly regularly correlated with alterations found in other areas of the context, whether neighboring or remote. Conflict can arise only if we abuse reason in senses I and II and assert that a pattern found in one area must necessarily also be the pattern that pervades other areas of existence—and thus we either mistake the nature of hypotheses and of their grounds, or else define some term like "perception", let us say, by a specific stimulus-response pattern (or equally, a specific field-configuration) and then imagine we are making significant statements when we say that it is impossible that X be an instance of perception and yet fail to exhibit the stimulus-response pattern in question, or fail to be a constituent or an instance of the specified field-configuration.

Where the correlations between stimuli and responses, or between various strands in field-configurations, have remained "highly irregular" even after exploration (as thorough as feasible to date) of further relevant factors in the context, conflicts seem to have arisen between psychologists on the one hand who wish to smooth out the correlations by postulating intervening determinants (such as "cortical sets, traces, residues, synaptic resistances, inhibitory and excitatory substances, inhibitory and excitatory tendencies . . . valences, urges, abilities, instincts, and so on"[6]), and psychologists on the other hand who prefer to state the complex correlations between observed factors without benefit of such simplification by postulate. However there is no slightest iota of reason (in any of the four senses) why these latter should deny the possibility of, or should close their minds to the search for, factors in fine-scale physiology, or in environment or conditioning, or anywhere else without limit, which may be found to explain what seem to be arbitrary deviations from correlations which are otherwise fairly regular. And so far as evidence is found supporting

[6] H. Woodrow, *Psychological Bulletin* XXXIX, 3.

the operation, or the probability of the operation, of any of these factors, a man needs no partisan commitment to one side or the other in the above seeming controversy in order to develop, and to use seriously, hypotheses about such factors. To insist, however, irrespective of specific evidence, that some such factors *must* be operating wherever there is deviation from what have been called "smooth correlations" would be on all fours with a physicist's insisting that there can be no jerks, no gaps, no discontinuities in natural processes, and that therefore where there is evidence of quantum-like shifts we can be sure, regardless of evidence, that there *must* be unknown factors regularly operating to produce the quantum discontinuities.

Besides, it is always extremely important to notice how far our talk about smooth or simple correlations is actually a comment on the methods and the capacities of interpreters. For a graph of correlations (to take one example) which on one set of axes is "most irregular" can always be made as straight or smooth or rhythmic as we wish by using another set of axes. And surely today no one would allege that there is a set of axes which is *the* right set, the absolute frame of reference. When we skew or alter axes in order to make a given scrawl smooth or harmonious, there is of course always the possibility that on the new axes the development of the graph required to represent the next set of data will violate the harmonious pattern presently achieved. But there is *always* precisely this same risk when, on *any* set of axes without exception, there is the prospect of developing any line which represents any sort of evidenced correlation in order to take account of further measured values.

If we object to complexity of statement as opposed to simplicity, we may always correct the fault by altering the notation used. But as for the structures meant by our statements, all of them (however various) are intrinsically equally intelligible. There is not one of God's modifications of which we can say that it could not fall under the attribute of cognition, that to add to its being its being thought would involve contradiction. Hence when we talk of the degree of intelligibility of the structures dealt with by theories, we are usually changing the subject of discussion from

those structures to biography or autobiography, and are talking about the ease or the strain, the long effort or the brief effort, which somebody experiences in dealing with the structures in question. An instance is the familiar fact that some people find Einsteinian formulations in mechanics much simpler than Newtonian, and others the reverse; as some people find a highly logicized (or formalized) geometry much simpler than Euclid, and others the reverse.

But let us examine an instance of what seems to be theoretical conflict in another field of study. There are influential people who insist that we cannot even begin the explanation of social processes unless we bring to the job an interpretive principle, say the Marxist principle that in the last analysis economic factors are always decisive of all social changes. Others urge that we must bring to, and use in, our social studies some other fundamental explanatory principle antithetic to Marx's. But must we not all agree that there is no serious way of determining how influential (or whether exclusively influential) economic factors, or any other kinds of factors, have been or are in historical changes except by examining the evidence from records and other cultural and technological remains, making observations of processes now under way, developing hypotheses (however intuitively or imaginatively or speculatively), and believing one or other of those hypotheses only so far as it is confirmed by the evidence upon which it was based and by further findings? And these findings are *equally* accessible to every inquirer regardless of his postulates as to the influence of the factors in question, or of his want of any such postulates. Hence it appears that commitment to a material interpretive principle is by no means logically required if a man is to enter upon social studies. And it appears further that the commitment of one man to one such principle, and of another to some other such principle, logically entails no conflict between the hypotheses the two may develop; and more than that, the two men thus committed cannot in fact generate conflicting hypotheses unless they support their beliefs by activities other than those we have distinguished as Reason in senses I, II, and III, and hence are not reasonable persons in sense IV.

UMI

In the 80's and 90's of the last century, scientifically-minded students of social processes began to urge that the "well-known" intellectual inferiority of Negroes to whites should not merely be asserted but should be carefully measured. As Gunnar Myrdal has remarked, "The history of the measurement of the psychic traits of the American Negro began with attempts to quantify what was already 'known' about him. And usually the scientists *found* what they were seeking."[7] Now is this an instance of assumptions determining findings which would not be valid except on the assumptions? Is it an instance of the necessity of altering assumptions if men are to secure other findings? Not, I think, for reasonably careful investigators. For we have no grounds for asserting that the students of the decades down to 1920 could not measure as reliably the performance of Negroes as they did the performance of whites in intelligence tests, but instead could only derive their figures from their assumptions. The real fault was the failure to recognize that evidence is needed to support *all* synthetic propositions; and that such evidence was needed but was largely lacking to support the particular synthetic proposition which asserts, for Negroes *or* for whites, that performance in certain so-called intelligence tests is a simple function of native capacity. The fault lay precisely *in assuming* that this was the case; and the fault would not have been corrected simply by *assuming* that it was not the case. Progress was made, not by veering from one assumption to the other, but by exploring the materials and finding significant correlations between factors of nurture (as well as of native endowment) and performance in tests.

But does the analysis we have sketched depreciate ideas? Does it imply, or even suggest, that investigators can or should approach any subject-matter with minds that are *tabulae rasae*? To say that the analysis logically implies this would involve us in strict contradiction. And if the analysis has suggested it, then its rhetoric is very deficient. For it is almost a truism—almost a tautology—to say that if a person is to accomplish anything towards explaining any subject-matter he must bring curiosity, imagination, patience, the disposition to alter even favorite beliefs

[7] Gunnar Myrdal, *An American Dilemma* (Harper & Bros., N.Y., 1941) I 145.

UMI

so far as the evidence runs against them (and usually also the more previously mastered information he can bring with him the better): in a word, he must bring intelligence with him to the job. This is almost, but not quite, a truism, since people do develop these virtues in the process of inquiry and explanation. And unless they possess them as Platonic memories from the heaven of Ideas, or their thinking is guaranteed them by Kantian necessary forms of perception and understanding, presumably first steps in developing such interests, habits, and skills do occur some time after the fertilization of that ovum which is to become a social scientist.

There could hardly be a more impressive instance of the elimination of the appearance of theoretic conflict mainly by the sort of work we have called Reason in sense III (the philosophical analysis of meaning) than the recognition by physicists and mathematicians of the equivalence of Einsteinian and Newtonian formulas about motion, provided sufficient qualifications are introduced systematically into the Newtonian formulas in order to take account of deviations such as those connected with very high velocities (the evidence for which, ***nota bene***, is observed equally by Newtonians and relativists). The only differences that remain which might seem to constitute or to support conflicting hypotheses are involved in Newton's words about homogeneous absolute time and the absolute motion, rest, and positions of which it is said to be a function. Although of course a Newtonian may, if he likes, assert that these terms designate for him various felt qualities (as of utter repose), this will not give him hypotheses in conflict with the relativists. What he would need to do, in order to make out his theory as thus in conflict with relativist mechanics, would be to show that there is some difference of theoretic content expressed by describing changing positions by their relations to whatever has the felt quality he calls rest, as against formulations which either exactly reverse that procedure or read off the relations by reference to frames distinct from either.

To move closer to our own bailiwick: Which of us has not—at least in our salad days—been pursued through the watches of the night by the question: ***When*** should we say we have a finding—a datum upon which to build beliefs and by which to check them?

Which are acceptable grounds for the belief that the campanile has a clockface and hands on its south wall? The noting of a configuration of that class which I believe that I, and others, have commonly named by the term "clock"? Yes. But again, no; for the slips of memory and the eccentricities of perception are notorious. Have I, then, more acceptable grounds for my belief when the statement I make in the presence of the tower converges with the statements of a dozen, or a hundred, or the majority of, other observers? That's better. And yet, after all, what should I be doing then but exactly the same *sort* of thing as before, though perhaps more of it, namely *noting* the tower, various persons, their positions, motions, and statements. I have changed, enlarged, the subject of my attention, but I have achieved no different *kind* of finding. Shall I turn pragmatist and say that a finding, to be taken seriously, must be an operation that leads into proliferation and growth of transformative operations? If I do thus turn pragmatist, then on the central question whether this operation or that does so lead, and which of the two is the more fruitful of such growth, I can get no relevant knowledge except by noting operations of the two sorts, and their contexts and sequelae. And, after all, how very odd of me to think that I can note reliably the divergences and convergences of the doings and sayings of a dozen or a hundred people (and note that these go on in the vicinity of the tower), or note the operations these lead into, but cannot note so reliably the clock-configuration on the south face of that tower!

But the problem is not so simple as all this. Schlick and Carnap and Russell and Moore (and hundreds of others, including Dewey) would scarcely have twisted and squirmed back and forth from one of these positions to another if they were thus merely changing from the consideration of one area or sort of subject-matter to the consideration of some other area or sort. There are indeed very important differences between what we accomplish when we consider merely what is within our field of awareness, when we consider intersubjective communication and what it probably involves, and when we consider what little we can learn of the immense operational contexts of either of these. But so far as we deal with these differences by the procedures labeled Reason I, II, and III above,

all semblance of theoretical conflict between them seems to dissolve. Private notings, inter-subjective convergences of statements and manipulations, strands of operational context—all of these occur, all are worth studious attention; but we have no serious grounds for defending any of them as if it were the rival or opponent of the others, as evidence for, or support for, our beliefs. For all that any of them is evidence for is whatever sorts of entity have been found (or inductively inferred by analogy with observed correlations between entities similar in some respect) to be more or less regularly correlated with the privately noted contents, with the inter-subjective convergences, or with the operational strands in question. This result ought to cure some species of epistemological insomnia.

To take another instance, we all remember that some people have regarded 2-valued and 3-valued or (2 plus n)-valued logics as somehow mutually incompatible (and not just as different, and like all different things therefore such that if all a man's attention and energy are concentrated upon one of them it is impossible that he should at the same time be dealing with any other of them). Many have interpreted a third value (in addition to truth and falsity) as some kind of function of frequencies of truth (or falsity) values in some sort of set, or else as what is asserted by true statements to the effect that some man ascribes a certain intuitive weight to a proposition of a certain set. Yet there are a few of such interpreters who then surprise us by alleging that relations could be expressed by the formulas of (2 plus n)-valued logics which could not be expressed in the formulas of two-valued logics. Of course if any two-valued logic contains, quite apart from its being two-valued, some kind of selfdenying ordinance which restricts its development by ruling out certain very commonly treated sorts of functions of true or false propositions, we might well say that the two-valued logic in question was incompatible with some of the analyses carried out in (2 plus n)-valued logics if those lacked the selfdenying ordinance. But even in this case the incompatibility is not an instance of any theorem in the one system *taken as in that system* being incompatible with any theorem of any other system *taken as in that other system*, but only an instance of some sorts of

development in the one, being ruled out by a selfdenying ordinance from development in the other. But why anybody should introduce such selfdenying ordinances, except merely as indications of plans of concentration (which are in no way incompatible with other men's different plans of concentration, or with one's own plans at other times)—that I cannot see. Certainly a logic's being two-valued does not require its author to impose any such restrictive ordinance upon himself or others. And it would seem to be true that we cannot rule out a two-valued rendering of any multi-valued logistic system unless some of the many values merge, so that we cannot say of any proposition that it must either have or not have value #1 (where of course its failing to have value #1 may consist in its having value #2 or value #3 or value #4 or value #5 and so on). What attracts many empirical scientists to multi-valued logics is, I think, their feeling that those logics yield them some sort of support for considering, and also respectable labels to attach to, hypotheses which they do not know to be true and also do not know to be false. However the distinguishing of any number of attitudes of belief or doubt towards the asserta of propositions is quite compatible with a two-valued logic. Such a logic would be strained only if a man were to say of the statement, "My attitude towards *p* is one of doubt (or of rejection, or of confident belief, or of interested curiosity, or *whatever*)", that this statement is not true, and yet it is not not-true either.

Again logics of strict implication and of material implication do not seem to be incompatible with one another, although truistically the concentration of *all* of anybody's efforts on the one is incompatible with his developing the other. Nothing in so-called material systems prevents the interpretation of the dominant implications (in the material systems themselves) of theorems by postulates (or by other theorems), as being strict implications in the sense that the denial of the theorems joined with the assertion of the postulates is selfcontradictory. And many years ago, in days when fortunately for us he was more than a visitor in the West, the Carus Lecturer did not merely argue that material logistics could be developed as subsystems of strict logistics, but actually carried out an instance of such development.

UMI

Even those who talk of the logic of love or the logic of power or the logic of events or the logic of art or the logic of cookery (as probably more people do than ever talk of logic in any of the senses just mentioned), as if they somehow conflicted with the logics of the logicians, need only to apply the procedures we have distinguished as Reason in senses I and II and III in order to discover (A) that they are talking (so far as they are asserting anything at all) about various causes and effects of love, power, food, poems, or some other sorts of entities, which causes and effects are not entailed, and are not ruled out, by any of the logics of the logicians and also do not entail or rule out any of those logics, and hence are not in conflict with any of them; or (B) that they are expressing approvals, preferences, disapprovals which could of course in no sense be theoretically incompatible with, or be ruled out by, any logic even where the logic itself might be the object of disapproval.

The supposed conflicts between what have sometimes been called different ways of knowing is another case in point. For we are often tempted to contrast knowledge by authority, knowledge by logico-mathematical demonstration, knowledge by utility, and knowledge by mystic intuition, as if they were conflicting alternatives. But if by saying that a proposition is known to be true one of us actually means only that it is enunciated by authorities, and another of us means that believing it is in some sense useful, and so on, then we would eliminate all semblance of conflict if each of us would simply say what he thus means—that is would substitute wherever appropriate our respective *definientes* for the *definiendum*. Thus we would make clear that what we mean by our apparently conflicting theses is only that propositions affirmed by authorities are affirmed by authorities, whereas propositions belief in which is in some specified way useful are propositions belief in which is thus useful, and so on and on. And these locutions are all perfectly compatible with one another.

But it is plain that serious philosophers have meant nothing so trivial as this. They seem generally to have intended synthetic statements when they have said that opinions affirmed by authorities, or opinions belief in which is useful, or opinions prompted by mystic insight, *aut alia*, are true or preeminently probable. Quite

generally they seem to have meant, by calling a proposition true, that it asserts such relations and characters of its subject-matter as that subject-matter actually possesses. One partisan then holds that propositions enunciated by authorities are not merely true in the sense of being enunciated by authorities, but are true in the sense that they assert some entities or other to be qualitied and related as they actually are; and so on of the other partisans. But if this is what is intended, the question of how high the correlation is between the statements of authorities, or the usefulness of beliefs, and the truth or probability of those statements or beliefs, is not a question that can be significantly settled by a definition, or by committing oneself to a postulate that the correlation is highest (or even infallible) in one case or the other. We have no serious way to approach an answer to the question except by gathering evidence as to how often authority X's predictions are confirmed, and so on. And this evidence is intrinsically as accessible to the partisan of one way of knowing as to the partisan of any allegedly opposed way of knowing. Otherwise the partisans could not possibly recognize their opinions as opposed.

From this conclusion there are two ways of escape. One way is for one partisan to assert that truth really is nothing but what is affirmed by authorities, another partisan that it is really nothing but what is useful to believe, and so on. But then we are back among the trivial tautologies which were just exposed. I do not think that considerable philosophers have espoused them; and even if they had, the various tautologies could not stand in theoretic conflict. The other way of escape is for each partisan to say that what he *really* means is that he is most interested in, or most hopeful of, the results of believing what is affirmed by authorities, or of believing what in some specified sense is useful to believe, *aut alia*. But here again there can be no conflict between any hypotheses which are supported by Reason in senses I or II or III, but only manifestations of diverse temperaments and conditionings, interesting to psychologists, and also of very *general* and *moral* interest if the persons thus expressing their temperamental differences happen to be influential in some field of theory or of practice.

In constructing histories of philosophy, nineteenth-century

scholars set up patterns which quickly became traditional and have persisted with remarkable stubbornness. None of these patterns (or stereotypes) has been more rigid than that of representing as in dramatic (or even melodramatic) conflict the attempts of so-called "continental rationalists" to establish truths about nature and history by logico-mathematical deduction, and the attempts of so-called "British empiricists" to rely on sensations only, rejecting necessities of reason altogether. Yet every reader of Descartes is impressed—indeed, if he has previously read the available histories of philosophy he is literally *shocked*—to find Descartes insisting in the *Regulae* that no deduction from other propositions could possibly demonstrate the truth of any proposition, although it might help us towards convenient exposition of them all. If the proposition called a conclusion is true, it can only be true (Descartes argued) because it is evident to the natural light, and not because any set or sequence of *other* propositions is thus true. And in letters to his old friend Mersenne, he complained that he could make no further progress in his study of vision unless he could get from the abattoirs of Paris a better supply of ox-eyes to dissect. This is the same Descartes, fragments from whose *Le Monde* promised to establish by the procedures of what we have come to call analytical geometry *all* the facts that make up the universe, past, present, and to come.

Again, in Leibniz's account of synthetic propositions as all of them only contingently true (if true at all), and of all necessary truths as analytic, we find a clearer statement than any which Hume gives us of the view that there can be no logically necessary connections between entities of any sorts that are distinguishable from one another.

If, on the other hand, to use general synthetic principles as self-evident without empirical support—as necessary truths—is to be a rationalist, then both Locke and Berkeley in their use of such principles as that of causation were very much more rationalists than was Leibniz. For the full story of this alleged major conflict the work of Spinoza and the work of Hume are especially important; and if anybody ever tells that story faithfully it will be a very long one. But we can say confidently that the widely accepted

story of the conflict between able rationalists and able empiricists (as distinguished from the straw men of the textbooks) is very largely mythology.

Such seeming theoretic conflicts in scientific and historical explanation, and in restricted fields of philosophic study, are innumerable and very challenging. The temptation is to go through a great many of them (and in very much fuller detail than we have done for any one of them to-night) in order to determine whether in fact they do yield or do not yield to the application of the sorts of activity distinguished as four phases of the work of reason. But certain other questions press upon us as philosophers, questions which are said to cut under and to expose as superficial all of our considerations to-night. Have we too glibly and carelessly talked of findings as being evidence for one specific hypothesis or another —and evidence equally for all interpreters? With the question "What is a finding? What is a datum?" we have dealt cursorily; and also with the seeming conflict between immediate notings, inter-personal convergences and agreements of the reports of several observers, and operations which lead into the transformation of other operations. But take any of these, *or anything else*, as findings—for *what* are they evidence? Will not this depend upon one's theory of evidence and of probability and one's basic convictions as to the structures and the kinds of being? And what is a fully developed theory of events, findings, and evidence but a philosophy, or a metaphysic? And are not philosophers and philosophies conspicuous for their sharp oppositions—never, some say, since the mediaeval controversy over universals, so sharp as they are to-day? And does not each major philosophical position, for all its differences from rival positions, claim to reject no evidence, to ignore or exclude no findings? If, holding even faintheartedly the ancient faith, we suppose that philosophical thought contributes at least something to the resolution of conflicts, but if also we learn that such thought characteristically develops opposing systems, the problem of the nature of theoretic conflict is indeed pressed home to us students of philosophy, and in aggravated form. For at this level the puzzles seem to grow in number, in complexity, and even in a kind of selfperpetuating if not automatically ex-

UMI

panding circularity. But do not despair. I shall not keep you here all night; for I have good reason to believe that neither a night nor twenty years would suffice to formulate—let alone to discuss—the questions which (in this connection) genuine perplexity or ingenuity or the love of debate can construct. I shall make only a few simple suggestions and leave to other occasions—and largely to the philosophic gifts, the special information, and the special quandaries of others of you—their application and their testing.

Men have, of course, meant many different sorts of activity, and many sorts of structures of concepts or of beliefs, by the word "philosophy". And so far as they are different sorts of activity, these are not in theoretic conflict any more than doing mathematics and doing archeology and singing a song and sailing a boat are in theoretic conflict. But when philosophies are construed as conflicting, they have usually been conceived as very comprehensive theories of the universe, developed with special attention to problems of the method and validity of explanation, to problems of the relation of interpretive activity to materials interpreted, and to problems of value.

Now rival philosophies are often conveniently distinguished by the different sets of basic categories which each characteristically employs. Thus it has been said of Platonists, Aristotelians, Kantians, Christian cosmologists, organicists, materialists, naturalists, that their basic categories are respectively: essence and becoming; form, process and purpose (or, rather crudely, substance and attribute); thing-in-itself, forms of organization, and phenomena; God's purposes and God's acts; dynamic organic interrelatedness; matter and motion; event, quality, and relation.

The question whether there exist instances of the kinds of traits or entities meant by any of these terms is not settled (or even in any way affected) by anybody's using the terms (or the kinds of things the terms mean) as basic categories—unless what we mean by saying of anything that it exists is simply that we are using it (or the name of its kind) as a basic category in our explanatory procedures. If we mean something else by existence (and I do not pretend to impose a "right" or "best" definition upon that term), then we must determine whether instances of the entities meant

by our basic categories, whichever they are, do in that sense (whatever it may be) exist, by means of evidence not composed of, nor generated by, our use of the particular categories as basic, but by means of evidence available to any thinker whether he uses our categories or others as basic. For we can describe anything encountered or imagined, and its found or supposed context and operations, *with precise equivalence of content* in our descriptions (though with considerable differences of nomenclature), whether we describe it by stating its resemblances and differences with respect to a structure imagined and so far as we know not otherwise existent, or by stating its resemblances and differences with respect to a kind of structure of which instances have been found to exist (in *any* specified sense of the term "existence").

We may wish to use as categories terms that name kinds of traits, structures, or operations which we suppose to be exceptionally pervasive of nature—or the kinds of traits, structures, or operations so named. But again our supposings and our choice of categories imply nothing whatever as to how pervasive of nature any sort of trait or structure or operation may be. For have we any seriously defensible way of determining how widespread in existence any factor is except by exploring areas of existence—and in any relation whatever to those sorts of operation which we call experiments? People who use the opposed categories of organicism or naturalism are sometimes (perhaps often) more interested respectively in similarities or in differences; in fused dynamic complexes or (some say, although I know of no impressive supporting evidence in the history of philosophy) in distinguishable ingredients of the various fusions. Of course we may, if we wish, thus change the subject and discuss the personalities and biographies of philosophers. But if we do, what we discover to be their differing interests can hardly be taken as entailing or as supporting different hypotheses about the distribution in the world of the various factors in which they are interested. It may be extremely difficult for some men to discriminate traits noticed by others. But this is not a consequence of the traits being intrinsically cognizable only by some—say those who employ as basic categories the kinds of traits in question or the names of those kinds of traits. If there were

UMI

traits such that only one philosopher or one sect of philosophers could cognize them or their likes, and only another philosopher or another sect of philosophers could cognize other traits or their likes, then it would be impossible for such individuals, or for the members of such sects, to conceive that they differed, since the conception by each, of the traits cognized by the others, is ruled out. Conflict develops when partisans neglect logic and science and philosophical distinctions and allow enthusiasm (or inertia) to prompt them to say that qualities or configurations found here and here and here must necessarily be the fundamental (or the really real, or merely the *de facto*) traits of everything everywhere.

The same story seems to hold of genetic or causal priority. We cannot add one iota of support to a belief that matter and motion are in some sense primary existents, whereas qualities are derivative from them, by taking matter and motion as basic categories and discussing and interpreting all that we find or imagine by its resemblances to, differences from, and its spatio-temporal correlations with, specific instances of moving bodies. The time has surely long since passed when anybody would argue that causal or any other kind of relation could imply, or justify, the reduction of one of the sorts of relata to any other sort. If certain growing organic structures are found to precede, to follow, to include, or to be included by, certain approximate mechanical regularities, then a scrupulous account of one in terms of its relations to the other will be exactly equivalent in content to a scrupulous account of the second in terms of its relations to the first. Hence the complete ineptitude of the common criticism that we are thus resolving philosophical conflicts only by asking others to accept our categories, or to translate their hypotheses into terms of those categories—as Johnny discovers that everybody in the crowd is out of step . . . with *him*; and recommends that they all get into step! Dealing with entities of any sort as related to one categorial frame or another does not make the entities one whit more or less like (or unlike) the constituents of either frame, or change in any way their relations to one another or to anything else. Choice of a set of categories makes no legitimate difference in the content of any

opinion. If any A differs in any respects from any B, or resembles it in any respects, then the scrupulous description or interpretation of A as a function of B will be identical in content with an equally scrupulous description or interpretation of B as a (roughly converse) function of A.

But when we go beyond the little area of findings—in whatever way the term "finding" is defined or used—to the immense areas about which we construct the hypotheses for which we take findings to be evidence, favorable or otherwise—then surely no finding, no qualitied and structured event or complex of events is, *in and of itself*, evidence for anything other than itself. We are therefore often tempted to say that whatever else than itself anything is evidence for must depend upon the interpreter's philosophy, upon his notion of the general hang of things in the world, or at least upon his notion of evidence. But what notion of evidence can we seriously defend except the notion that an occurrence of the sort A is evidence for an occurrence of the sort B, so far as the likes of A have been found to be accompanied by the likes of B, or constituents or phases or analogues of the one with constituents or phases or analogues of the other (proper allowance being made, of course, and by the same procedure, for all other known significant relations in the field)? We have every one of us at one time or another objected to such an account as "pedantry". In moving experiences of poetry and religion and friendship, and of everyday doings like saddling a horse or felling a tree, we have all felt nisus, continuities with the past and tendencies pushing into the future, which prompt us to regard these experiences as evidence of a better sort than the correlations mentioned. That we have such experiences is indisputable. That they induce confident beliefs is widely recognized. But that they are evidence for that, the belief in which they induce, we cannot establish by the vividness of our feelings or the strength of our convictions. Men felt vividly that the earth is at absolute rest; that such and such favorite paintings and poems *must* express to all men of all ages the most precious of all insights or convey to them the greatest delight; that their countries were bound to triumph in wars (some of which, in the event, they have won, some lost); that there just could not be a shift in the activity

UMI

of a physical system, or of any part of a physical system, without a superimposed cause. But can we say that these feelings or convictions were themselves evidence for what men thus believed, except so far as a positive correlation is established between such convictions and things turning out as the propositions (constituent of those convictions) assert? If what we experience is something distinguishable as B developing in, or out of, A, and an aura of felt nisus that pervades the development, what would justify us in regarding A plus the nisus as evidence for B (so long as the nisus does not actually include the occurrence of B), except our observing a positive correlation of the kind discussed between these factors? For we often experience effort that fails of result; and there is little reason to suppose that felt effort is involved in those gravitational relations between moon and ocean called the tides (to take one example from millions). Yet in the light of correlations well-established, the fact that the moon is in a certain phase is exceedingly good evidence for certain states of the tides.

Again we sometimes offer as a better interpretation of the evidence-relation, the thesis that the structure of nature (or of the world), so far as we understand it, justifies us in regarding A as evidence for B, if that structure is such as to include a configuration of A's and B's regularly associated in one way or another. But what way have we of determining what the structure of nature probably is, except precisely by exploring the similarities and differences and various other correlations of the occurrences of as many of the various strands of existence as we can? Thus this last notion of the evidence-relation seems to be an illustration of, rather than an alternative to, the "correlation" interpretation. If we attempt to use an *a priori* theory of the structure of nature in order to determine what is evidence for what, we can get no farther than saying that if nature is structured thus and so, then restricted areas of nature must accord with that structure. But that procedure could never yield any slightest grounds for believing that nature is so structured, or for believing anything rather than its opposite about the traits of the restricted areas. For the only serious ground we could have for the probable truth of the above protasis, would be the truth or probability of the apodosis stated (along with various other apodoses).

As for basic categories as reflecting evaluations, if a man's evaluations are essentially expressions of his approvals, then there need be no theoretic conflict between Jones and Smith when Jones approves and Smith disapproves of any sort of event, structure, plan or operation. And if Jones's and Smith's different philosophical categories essentially reflect such differing approvals, so far they neither express nor entail any conflicting beliefs. If on the other hand a man's evaluations are reports, or hypotheses, to the effect that certain entities have (or would have if they came into existence) the traits or structures which he means by the word "valuable", then the determining whether his opinion is correct is a matter of ordinary scientific finding and inference, and is not affected by his using as basic frames of reference in description and explanation the traits which he means by "valuable". If his neighbor means some different class of characters by the term "valuable", the two are not thereby in theoretical conflict; and moreover they will see that they are not if each will make clear which specific class of traits he thus means. One says that X is more valuable than Y; the other reverses the judgment. But if they mean different sorts of traits by the term "valuable", then determining how much of each sort of trait X and Y may exhibit, or how much the occurrence of X and the occurrence of Y may favor the manifestation in various L's and M's and N's of what each means by "value", is a problem to which exploration and evidence are relevant, but not dispute. And if Jones and Smith mean either the same sorts of traits or different sorts of traits by "valuable", then unless we hold that there is evidence available to one which is intrinsically incognizable by the other, the two cannot be justified in holding conflicting opinions by any of the four sorts of work of reason which we have considered. If Jones and Smith are antagonistic, but neither we nor they are able to make approximately clear whether each is expressing emotional attitudes or is asserting that various objects have (or lack) in various degrees certain sorts of traits which he means by "valuable", then neither Jones nor Smith nor any of the rest of us is in a position to say that there is theoretical conflict here, any more than that there is theoretical conflict between the ocean and its shores when we

UMI

> . . . have watched the hungry ocean gain
> Advantage on the kingdom of the shore,
> And the firm soil win of the watery main,
> Increasing store with loss, and loss with store.

In reasonably mature scientific and scholarly disciplines the holding of conflicting opinions about areas of their subject-matters is not regarded as a virtue but rather as a sign that the function of evidence has been neglected or that analysis of meanings has been omitted or confused. It is in some of the so-called social sciences, in some psychological discussions, but particularly in philosophy, that we often find divergence of explanatory hypotheses welcomed as such. A distinguished economist has lately written: "The maximum development of differences of opinion in all fields of thought is eminently desirable." Now if no two people in the world ever agreed in any opinion, and if nobody ever agreed with his own earlier opinions for five minutes running, we should only be *approaching* (but by no means achieving) the maximum development of differences of opinion. Is that *really* a desirable or a defensible objective?

But if my friend means by his statement that we should all recognize that possibilities are logically infinite (that is, that the denial of their infinity is selfcontradictory); that no matter how much we might ever come to know, the variety of further possibilities of internal structure and of external context of what was known must remain unlimited; that, as the Carus Lecturer has reminded us in writing of postulate sets, if any one of them is "sufficient for a mathematical system, then there will be any number of alternative sets . . . which likewise are sufficient"[8]—if my economist friend means to convey such advice by his statement, then his celebration of maximum differences of opinion is a way (but a misleading way) of emphasizing a truism of elementary logic. For what is it of which we can say with logical necessity that it could not be? Nothing; that which literally and completely is, and is not, anything whatever. And of what seeming propositions can we say that it is logically impossible that they be true (or indeed false), except the selfcontradictory propositions which,

[8] *Philosophy and Phenomenological Research*, IV 236.

in totally denying whatever in one part they assert, assert nothing.

To turn from the possible to whatever is contrasted with it as in some sense actual, how much should we have to know of what, among infinite possibilities, actually exists or has existed, in order to know that certain sorts of relations or qualities are (and will be) nowhere realized in events? What we should have to know in order to do this is all events and all their qualities and relations, and besides this the truth of the proposition that what we know is absolutely all—that there was never and will never be anything more or other. But to know the truth of this latter proposition has been shown by dozens of philosophers to be logically impossible.

We must therefore insist that every occurrence is compatible with an unlimited number of alternative explanatory hypotheses. But does it therefore follow that it is desirable, or at all defensible, that men should take sides, one holding that one hypothesis is the most probable and every other man holding that some other hypothesis is the most probable, and all changing their beliefs as fast as they can? So far as different evidences are intrinsically inaccessible to different interpreters they could not even imagine that they differed with respect to "they knew not what". So far as, of accessible evidence, one man deals with one section, another with another, the different inferences they may make, when geared to their supporting evidence, must be entirely compatible. And if the different interpreters use, let us say, one of them one method of reckoning probabilities, another another, then for both it will be equally true that on evidence E, by probability method P_1, inference I_1 will enjoy thus much support; whereas on the same evidence E, but by probability method P_2, inference I_2 will enjoy so much support. And if one asks which is the better method of reckoning probabilities (logical inconsistency, of course, ruled out in both cases), have we any serious way of approaching an answer except by finding which method supports inferences the more commonly confirmed by further exploration and observation?

No, philosophy considered as peacemaker, as we have done tonight, does and can in no way limit the possibilities of what may exist, of what may be meant, or of the range of hypotheses that might be true. It carries with it no logical or theoretical restrictions

UMI

upon the free play of imagination, intellectual or poetic. But would our analysis, if accepted, nevertheless in fact remove a major stimulus to intellectual advance? Is the strife of partisans the best seedbed for new hypotheses and new discoveries? In asking these questions we are again changing the subject of discussion from the nature of theoretical conflict to the temperaments and psychological proclivities of thinkers—of scientists and philosophers. The serious way to ascertain the probabilities with respect to our changed subject would be, not by debate but by the fullest sort of historical and psychological investigation. I, of course, do not know the answer. But if theoretical conflict is in fact incompatible with the careful prosecution of the procedures of reason which we have discriminated, then would it not be a very odd thinker who understood this situation and yet could stimulate himself by participating as a partisan in such conflict? He would be much the same kind of person as the man who could actually encourage himself by holding a belief when he was convinced that he had no other ground for the belief except that it thus encouraged him. Undoubtedly there are some persons of such temper, and even among our ablest scientists and philosophers.

Two years ago I lived and, in a small way, worked among a large number of physicists, chemists, mathematicians, and engineers. The problem assigned them was judged to be one of the most difficult men had ever attempted; but the men to whom it had been assigned were thought by their peers to be the most gifted, informed, and energetic group of scientists ever assembled on the face of the earth. There appeared to be four important alternative hypotheses as to the best way to solve the problem. Some of the scientists were intense partisans of one hypothesis as against its rivals—even to the point where divergent opinions hurt their feelings and in some cases actually destroyed friendships. Yet none claimed that he had one iota of evidence that was not fully shared by all the others. A much larger number of these workers felt that, where no evidence so far secured rendered any one of the four hypotheses more probable than another, it would be nonsensical to be a partisan of any. Did these latter men lose their intellectual and imaginative drive? Committed even tenta-

tively to no position, were they less creative than the partisans? They took the view that for the exploration of the factors relevant to each hypothesis investigators should be assigned, not by reason of their preference for that particular hypothesis, but by reason of their being especially competent, skilled, and informed with respect to the various materials, operations, and mathematical structures, which in the several cases needed to be investigated. This situation seemed to me as close as anything a stray philosopher was ever likely to encounter to a test case bearing on the alleged stimulating effect of the clash of beliefs, of theoretical conflict. And what was the outcome? It was mixed. In the opinion of the experts great achievements were made by both sets of workers, the partisans and the non-committed; and if more were made by the non-committed, there was a larger number of such workers. There was the further interesting fact that most of the partisans were the children of nations and cultures, by no means wholly different but yet significantly different, from those of the non-partisans. No one on either side, we must remember, claimed that (as distinguished from the evidence shared by all) his general position was itself a ground for ascribing relatively higher probability to his favorite hypothesis. So the situation had no features which were not completely in accord with the general analysis we have sketched to-night. But on the side of psychological fact, the results did seem very strongly to support the view that we cannot defend a general hypothesis to the effect that participation in theoretical conflict is more stimulating to the performance of intellectual work than is the rejection of such conflicts as irrational. For such effects certainly varied from individual to individual, and probably in significant correlation to their cultural conditioning.

Some people advise us that theoretical disputation, the clash of systems, and effort to prove others mistaken, is a relatively harmless outlet for aggressions that might otherwise be expressed in approaches to murder and war. But most of us would be rather worried about the mental health of persons whose intellectual work was very largely nourished by impulses (aggressive and hostile) to show that other people as such—that is, as other people—are mistaken in their opinions. But of course his psychological

UMI

health, or its opposite, has no decisive bearing on the truth or the probability or the insight in any man's opinions, except only those of his opinions which may be about the state of his psychological health.

But surely "a plain tale", as Bosanquet quoted the Prince, will yet "put us down". Surely it is as obvious that points of view determine findings as it is obvious that by walking to an open door and looking into a lighted room a man will see things he did not see when he looked from a distance of a mile. This is indeed obvious, either as a report of much cumulative experience, or even tautologically obvious upon customary definitions of "perspectives" or "points-of-view". So far as tautologically obvious, the thesis neither excludes nor entails any synthetic proposition. And so far as it is a report of experience it seems to have no logical—nor even a relevant analogical—bearing on our issue. For, as we have seen, the choice and the use of any set of categories does not entail, and is not entailed by, the hypothesis that what is named by the categories exists, is pervasive of being, is causally efficacious, or is valuable. What supports such hypotheses, and what supports general philosophical positions if they are cosmological hypotheses, is evidence found. If employing any system of basic categories in fact prevented (it could not logically exclude) *any* man from observing a room from a mile's distance, from its doorway, or in any other way or from any other position, or prevented any man from exploring anything whatever in any way or from any vantage point, then a lover of knowledge would eschew the procedure as the worst possible poison to intelligence. He would probably complain, as did Chuang-tse four hundred years before Christ, that "with a learned person it is impossible to discuss the problems of life; he is bound by his system".[9]

If we are to resort to plain tales, we must ask: Does it really fit our experience to assert that competent people whose basic categories are, say, those of monism or of pluralism do, when they look into a room or when they explore any subject-matter, high or low, find respectively entities resembling or differing in more ways?

[9] As reported by Kurt Goldstein in *Human Nature in the Light of Psychopathology* (Harvard Press, 1940), p. 115.

And if this should be found to be true would we regard it as throwing light on the personal idiosyncrasies, interests, and capacities of the observers? Of two glasses of milk, the drinking of one may transmit typhoid infection, the drinking of the other may not. Is a monist justified in saying that the two glasses have more resemblances, continuity, unity, or are manifestations of a more homogeneous deeper reality than is a pluralist? Only if some traits are as such, and intrinsically, observable or inferrible by the one but not by the other.

But does all this rely on a naive so-called spectator (or even angelic) theory of knowledge? Do we deny, or overlook, the extent to which cognition is a process interacting with other processes inside and outside of our skins? As for denying such interactions, there is nothing in our procedure which either asserts, or could entail, any such denial. And we cannot seriously establish how much or how little of such interaction does go on, and what its pattern is, by *adopting* a spectator theory of knowledge or an instrumentalist theory of knowledge. We can determine these matters, not by merely acting (if acting is distinguished from cognition), but only by noticing the configurations and correlations of various stretches of operations including those that are the observed constituents of cognitive operations. Of how much in these areas any of us is ignorant, or how much any of us overlooks, is a matter of how extensive our knowledge of history, psychology, physiology, and the like may be. It is not a matter, nor is any man's great or little knowledge of these disciplines a matter, of his accepting or rejecting the account of philosophical work as essentially irenic which has been sketched tonight.

Such pacifism of philosophical reason is not an empty gesture of crying "Peace, peace, when there is no peace". It is something to achieve (or to approach) by hard work. If the interpretation is theoretically acceptable it is a summons to such philosophers as are not merely informed but are also in the ancient sense lovers of wisdom, a summons to jobs, almost innumerable jobs, that need doing. For, if the view is satisfactory, theoretical conflicts are largely wasteful of men's intellectual energies, and if they are actually conflicts of opinion and not merely oppositions of interests

UMI

or of passions, they are resolvable by the kinds of work of reason which we have distinguished and illustrated. At the best, such conflicts tend to fog over our practical oppositions and to distract us from the work of understanding them;—as the insufficiently examined seeming opposition between national interests and international government (to cite one instance from thousands) may easily prevent our discovering the probability that international government is needed, if nations are to survive at all, and even have *any* interests, high or low, let alone satisfy them. At the worst, theoretic conflicts nourish and greatly increase practical antagonisms. And where groups of human beings share any basic preferences—even for life over death or for health over disease—many of their practical disagreements will be found to reflect conflicting opinions about the probabilities that various policies will secure or enhance what they are agreed in approving and desiring. In such cases the resolution of theoretical conflicts, and the making clear how that resolution can be effected, fulfills the ancient faith in reason. And it could be a chief contribution of philosophy to the fruitful reconciliation (as contrasted with the mere brute suppression) of the oppositions—economic, political, and military—which remain threats to the very existence, and hence (as Aristotle observed generally of threats to our existence) necessarily also threats to all the precious sorts of achievement, of creatures of our kind.

WILLIAM R. DENNES

The University of California

A PHILOSOPHY FOR THE ATOMIC AGE[1]

THREE chief ingredients of Western Culture have had a separate origin and a relatively independent growth. The oldest is Hebraic-Greek-Christian ethical monotheism. It has contributed to our culture its religious organizations, creeds, and rites, and its moral code. The Roman-Celtic-Saxon-British democratic and liberal social progressivism is nearly as ancient. Working persistently through several centuries, this ideal trend has shaped the social pattern of Western Culture, creating all legal systems, and social and political institutions, including the United Nations. The latest constituent of our culture to appear may be called the spirit of modernity. Beginning in the period of the Renaissance this creative spiritual force has flowered and fruited into numerous universities and research associations, modern music and art, historical and literary criticism, and, above all, natural science and technology, with its numberless industrial ramifications. Most educated people, howsoever varied may be their cultural interests and attainments, recognize that much of the tension and turmoil that is quite characteristic of contemporary society arises from interrelations and conflicts among these three basic ingredients as they are now entering into the constitution of the Atomic Age as its precious heritage.

Philosophy, with its special interest in criticizing and evaluating the whole, as well as every aspect of culture, has always been deeply concerned with all three of these creative forces. Nevertheless, the rapid advancement of natural science and technology has recently been the dominant influence upon philosophy. It must be

[1] Presidential address for the Western Division of the American Philosophical Association, prepared for the University of Chicago meeting, May 9, 1946.

UMI

admitted that the purely formal and abstract sciences of mathematics and logic permeate all of the experimental sciences, and most particularly those that are currently transforming our whole way of life. Nevertheless, the emphasis should now be placed upon those additions to exact scientific knowledge that have given man a wider control over nature. For the drastic effects of this growing mastery of nature upon philosophy, as well as upon all other cultural ingredients, are already of vital concern to thinkers of the Atomic Age and will become increasingly more so. What is especially needed today is a fresh approach to philosophy, that will classify and evaluate this recently acquired knowledge and experience, and summarize its effects on epistemology and ethics. Incidentally such a discussion may uncover some significant philosophical problems that will require further investigation.

Doubtless all philosophers would agree that experimental natural science is man's intelligently planned interference with nature aimed at comprehending and controlling its complicated processes. This simple definition implies that experimental science has two basic objectives. One is a complete and exact knowledge of nature, a determination of its general laws, and of the concrete inner structure and functionings of its constituent particles. The other objective is the control of nature, the effective utilization of natural knowledge to give man fuller mastery over the vast primal energies, both potential and kinetic, which are the essence of nature. "Knowledge is Power", said Francis Bacon, and that power over nature which accurate scientific knowledge gives man is a major objective of natural science.

Correlated with this important and generally recognized distinction between the basic objectives of the experimental sciences is the elementary but essential division between pure and applied sciences. In the pure sciences, the major objective of scientific research is the discovery of the hidden secrets of nature, without regard to the utilization of the resulting knowledge to control physical energies. Recent advances in astronomy provide illuminating examples. But in the applied sciences, the other objective is uppermost. Here research becomes the technological development of scientific knowledge to make it generally available for every man

in the attainment of his purpose of adapting himself to his natural environment. New and improved apparatus in the field of electronics constitutes an excellent example of this objective of applied science. To be sure, it must be emphasized that no sharp line of demarcation can be drawn. Suggestions as to how knowledge could be utilized often arise out of pure scientific research, and new insights into the hidden secrets of nature are frequently gained from technological developments.

The success of the natural sciences in realizing both major objectives has been truly prodigious. Beginning with the notable work of Clerk Maxwell (1831–1879), and extending to the opening of World War II, many epoch-making additions to natural knowledge were made, including the following: the discovery of radioactive elements, and the entire series of rays called the electromagnetic spectrum; the promulgation of the special and general theories of relativity, with their three corollaries—the theory of the equivalence of mass and energy, the notion of a four dimensional space-time continuum having non-Euclidean properties, and the concept of gravitational fields; and the amazing exploitation of the quantum theory, according to which electricity and light are both analyzed into discrete particles called *quanta*. These discoveries have actually shifted the emphasis in natural science from the theory of evolution of organisms to the new physico-chemical, mathematical conception of atomic structure and energy. In the decade preceding World War II a fruitful program of intensive research resulted in the invention and construction of the cyclotron for experimentation on the nucleus of the atom, and the identification of separate isotopes within chemical elements, about 370 radio-active isotopes of the 83 stable elements having been differentiated by 1940. Especially significant among all of these prewar discoveries is the differentiation within the atom of protons, electrons, and neutrons, and the remarkable fact of the indeterminacy of their movements.

So revolutionary were these and many other discoveries that philosophy, in the years between the two world wars, was almost completely dominated by pure natural science, especially physics and chemistry. In the first quarter of the twentieth century, Ideal-

UMI

ism, Pragmatism, and Realism were the recognized philosophies, but all three were made academic and obsolete by the vast accumulation of natural knowledge, much of which was at variance with the prevailing scientific conception of the world. Scientific philosophies, which undertook to exploit this rich store of knowledge, arose and flourished. Three types can be distinguished.

One type is the trend represented by the Unity-of-Science movement, of which the *International Encyclopedia of Unified Science* is an especially valuable product. The philosophical heart of this movement is logical positivism, or scientific empiricism. Its basic objective is the creation of an accurate scientific language that can serve as a basis for the unification of all natural knowledge. Like Comtean Positivism, this scientific philosophy is anti-metaphysical. It would replace what it regards as the meaningless jargon of metaphysical terms with symbols that possess as precise a meaning as do the symbols of mathematics, and it would use this precise symbolical language to bring about a complete unification of all the sciences. Although this type of scientific philosophy is definitely abstract and formal, great credit must be given to the late Dr. Otto Neurath, editor of the *Encyclopedia*, for his invention of a visual grammar containing around two thousand isotypes, or pictograph symbols which have made statistics come to life. This suggests that logical positivism by no means confines itself to the physical and mathematical sciences. For the Aristotelian definition of man as *animal rationale* it substitutes *animal symbolicum*, and applies this concept to culture as a whole, including in its purview myth and religion, and art and history, as well as language and science. Hence it replaces objective metaphysics with an original and unique synthesis of conceptualistic logic and philosophical anthropology.

The second type of scientific philosophy that arose between the two world wars may be called scientific relativism. It is more friendly to philosophy as traditionally conceived. Instead of identifying philosophy with the logical analysis of pure natural science, representatives of this trend attempt to formulate a tentative cosmology that is in accord with recent additions to natural knowledge. This is not an easy task. For to understand these additions

fully, the philosopher needs to be equipped with a detailed technical mastery of mathematical physics and chemistry, and few, indeed, are the philosophers who have this equipment. In consequence, scientific relativists have been inclined to accept the findings of the natural scientists, albeit somewhat haltingly and sceptically; to interpret them so as to clarify their philosophical presuppositions, which are denied to have any ultimate validity, and then to formulate an imaginative conception of the physical universe by adding their conjectures to these purely relative data and generalizations. The result is an hypothetical cosmological construction that utilizes recent findings of pure scientific research. Recall, for example, the interesting illustration of Peter and Paul, who were imagined to occupy different time-systems, which relativist philosophers use to clarify the nature of the plural time-system universe implicit in the theory of relativity.

The most involved and intricate of the three philosophies of science that emerged between the two world wars was that of Professor Alfred North Whitehead, who was called from Cambridge, England, to Cambridge, Massachusetts, to teach philosophy students at Harvard University his new cosmology and metaphysics. His teaching and writings have exerted a profound influence on contemporary American philosophy. His first contribution to the literature of scientific philosophy was entitled *An Enquiry Concerning the Principles of Natural Knowledge* (1919). This great work can be said to have marked a turning point in philosophy with its motto, "Nature is closed to Mind", and its rigorous attempt to describe "the passage of nature" in exact scientific language. Dr. Whitehead's conception of duration as a spatio-temporal physical continuum, and of events as duration-blocks cut out of this continuum by acts of extensive abstraction, along with his profound analysis of actual entities and eternal objects, are highly original. Moreover, his ambitious attempt to "frame a coherent, logical, necessary system of general ideas in terms of which every element in our experience can be interpreted",[2] makes his philosophy of science a complete metaphysics, and in this respect the polar opposite of logical positivism.

[2] A. N. Whitehead, *Process and Reality*, 1929, p. 4.

Now that we have entered upon the Atomic Age, a critic should show complete impartiality toward each of these noteworthy scientific philosophies. Although they are to some extent mutually contradictory, all three are entitled to respect. Each has undoubtedly made permanent contributions to the philosophy of science as a whole. They prove that philosophers writing in that period were aware of the accomplishments of natural scientists, and deliberately endeavored to reconstruct philosophy to accord with the rapid development of pure natural science. But this qualification is important. These three scientific philosophies were primarily concerned with the philosophical exploitation of the theoretical results attained in the pure sciences before World War II. But now our primary concern must be the influence upon philosophy of wartime advances made in the applied sciences. For the governmental stimulus to research to exploit scientific knowledge as a war weapon has resulted in advances in our technological knowledge that are currently far more consequential for philosophy than any thinker, who was merely imagining what these effects might be. could even have dreamed prior to 1939. Whereas the three between-the-wars scientific philosophies were chiefly interested in interpreting recently formulated theories of pure scientists, our major concern today is to rebuild a world that is tottering from the explosions devised by technological experts, without throwing away the countless useful appliances which these experts have created.

In one of his latest and best books, *Adventures of Ideas* (1933), Dr. Whitehead gave some attention to technology and emphasized a principle that these wartime technological advances have abundantly verified, but the verification of which has made his own philosophy of science somewhat obsolete. That principle is the *principle of the positive acceleration of cultural progress.* Whereas formerly the time-span of significant scientific achievements was much longer than that of a single generation of human beings, making it necessary to train youth to adapt themselves to fixed conditions, today this time-span is a great deal shorter than that of one generation, so that we must now educate our young people

to face completely novel conditions and situations. This basic principle is the key to the door of the Atomic Age.

In accordance with this principle of the positive acceleration of cultural progress, and largely ignoring the various philosophical interpretations of their theoretical findings, scientists have actually created a totally new world. It cannot be too much emphasized that philosophers are today confronted with a scientific conception of the world entirely different even from that which existed between the two world wars. As a matter of fact, it is our intention presently to formulate such a conception. Moreover the technological exploitation of scientific knowledge that has occurred within a six year time-span has already produced a new political alignment and social organization. To paraphrase Mr. Winston Churchill's famous statement, seldom have so many been so affected by the research activities of so few. Certainly philosophers should be the first to ignore such potencies as have been released, and such crying needs and fears as these potencies have aroused. Hence a fresh approach to philosophy, which will throw light on the situation created by the recent technological exploitation of scientific knowledge, is a major human need for the Atomic Age.

In attempting such an approach, it is important to elucidate first of all the significant extension that engineers and technicians have made in our control over nature. Such an elucidation calls for a changed scientific conception of the world. A division must be made between the realm of nature within which human control is, and those realms within which it is not, significantly achievable. The meaning of the term 'quintessence' can be modified, and its adjectival form can be used to refer to all of those realms of nature which cannot be brought under man's control to any appreciable extent. These realms are the *quintessential realms*. Now we know by spectroscopic analysis that the same chemical elements and isotopes that are found on earth are present in the celestial objects of those realms, and hence we must not commit the error, made by the ancients, of thinking that heavenly bodies are constituted of a purer essence than are the physical objects that are nearby. In using the word quintessential to designate the celestial realms our

only intention is to stress this significant and frequently ignored fact that, in the present stage of natural science, there is no technological control over the realms of nature that lie beyond the earth's ionosphere. For this means that technology is restricted, at least for the present, to that portion of the natural world designated as the *terrestrial realm*. And it also means that the extension of technological control over nature falls within this realm.

The terrestrial realm has a triadic structure: air or atmosphere, earth or land, and water or sea; and hence it is *an aero-terraqueous globe*. Obviously this widely used division is a modernized form of the classic Greek conception of four elements: fire, air, earth, and water, of which Empedocles and his disciples believed every terrestrial object to be a mixture. For it was natural for them to think that physical objects are made up of what they constantly observed in large quantities. We know that fire is a chemical alteration whereby burning transforms various things into gases that escape into what the Greeks called air. The word 'atmosphere' is a more accurate term than air to refer to the totality of the earth's gaseous envelope, because it comprehends not only those gases released by fire, but other light elements as well. Democritus' atomism triumphed over Empedocles' pluralism. Modern scientific atomism as embodied in the table of elements and isotopes is our conception of the basic ingredients of all physical objects, whether of the aero-terraqueous globe, or of the quintessential realms. Nevertheless, a division of the terrestrial realm into earth, water, and air, or land, sea, and air, is a useful commonsense combination of the earliest Greek thought with modern knowledge. For even within the table of elements it is useful to distinguish three groupings, solids, liquids, and gases; and this scientific division roughly corresponds to the commonsense division.

Let us now introduce the conception of *ternary experience*, basing it upon this commonsense division of the aero-terraqueous globe that has come down to us from Pre-Socratic Greek philosophy. For when we think of land inhabited and utilized by human beings, we have *terranean experience*. And when we think of man sailing, and otherwise using the sea, we have *marine experience*. And again, when the atmosphere is thought of as that through which men fly,

and send and receive radio communications, we have *aerial experience.* Now these three in their unity constitute ternary experience, and it must be especially emphasized that they are not to be conceived as mutually exclusive. Since they are modes of experience, their unity is more important than their diversity. Here is a specific example of a single unified ternary experience. In making a seaplane flight one departs from the land to embark in the plane, takes off on the water, ascends into the air and cruises about, descends into the water, taxies to the beach and disembarks on the land. Note that throughout this discussion the word 'terranean' is used to refer only to the landed, or continental and island masses of the earth, whereas the word 'terrestrial' is used to mean the whole planet, the earth with its enveloping atmosphere.

One reason for formulating this conception of ternary experience is to clarify exactly how our techniques for controlling nature have recently been immeasurably enriched, and especially within two major domains of our terrestrial environment, the sea and the air. Being original and of prime importance this conception requires further elucidation and amplification.

It is assumed to be now rather generally agreed among philosophers that when the word 'experience' is used to refer to significant human experiences of nature, rather than to animal adaptations to environment, or to relatively insignificant human acts of awareness or sense perceptions, it comprises an objective environment, modified and reconstructed by man's tools and instruments and, above all, by his symbolical or reflective thinking, which is admittedly the source of all his inventions. If this is the real meaning of significant human experience of nature, then the sea, in abstraction from the technological development of man's knowledge of it, is not marine experience, and the atmosphere, in abstraction from the technological development of man's knowledge of it, is not aerial experience. But the sea, the total water area of the earth, modified by cables, docks, ships, and other marine inventions, when any of their intricate, highly developed and diversified instrumental equipment is properly functioning under human control, is *marine experience.* And the atmosphere, that gaseous multilayered envelope which enshrouds the earth, modified by

technological apparatus such as airplanes, with their sensitive instruments, and radio sending and receiving sets, when any of these are properly functioning under human control, is *aerial experience.* Likewise, the earth is not terranean experience, but the earth as modified by factories, mines, bridges, transportation, and communication systems, with any of their manifold and marvelous equipment functioning under human control, is *terranean experience.* Our thesis, then, is that we must enlarge our definition of significant human experience of nature into this ternary conception. Only by so doing can one deal adequately with the enormous store of fresh knowledge which natural scientists have garnered during the war years, much of which consists of interpretations of marine and aerial experiences.

Thus we inaugurate our new approach to philosophy by sharply distinguishing the aero-terraqueous globe from all quintessential realms on the basis of the transformations made by technology. On this globe man dwells and carries on his scientific research, his philosophizing, his worshipping, his aesthetic activities, his political finesse, and his living, adapting himself to it as his environment. Scientists have succeeded in winning such extensive control over terrestrial nature in all three of its divisions, that human experience of the aero-terraqueous globe has now become truly ternary in form. But, howsoever much he may use scientific instruments of observation and analysis to penetrate the quintessential realms to ascertain their myriad constituencies, and to measure exactly their immensities and lightyear distances, man cannot yet even begin to control those globes, galactic systems, and interstellar areas, which lie beyond the earth's ionosphere. He may imagine that there are other rational beings like himself inhabiting various celestial orbs within the sidereal universe, but he cannot know this, and certainly his control over what is going on anywhere beyond the outermost gaseous rim of the aero-terraqueous globe, which is his domicile, is so feeble that it is inconsequential. For note that while man has planned, he has not yet made even one single trip to the moon, which, for our purposes, is included, along with the stratosphere and the ionosphere, as a part of the terrestrial realm. It follows that while astronomers have unquestionably discovered

considerable pure knowledge of the quintessential realms, this is in no way comparable to man's ternary experience of the globe which he inhabits. This can be briefly summarized in the formula: Pure science plus technology equals human control, and this we have within the terrestrial realm, and pure science minus technology equals the absence of human control, and that is our relation to the quintessential realms.

Whether man will ever be able to extend his technological control to the quintessential realms we do not know. But we do know that within the terrestrial realm, he has, during our generation, won an amazing victory. And that victory is the greatly increased extension of technological control over the primal forces of nature. Prior to the first World War, scientists had only made a beginning in the development of two of the major forms of ternary experience. To be sure, men had sailed the sea for centuries, but they did not master it to any appreciable extent until the submarine and its accoutrements, and other valuable marine instruments, were perfected. And prior to World War I, men had learned a great deal about the atmosphere, and they had already invented the radio and the airplane. Nevertheless, it has been only within the past decade that scientists and inventors have improved the old and made new inventions which have given man his present extensive mastery of the air.

It is difficult for us to realize that up to the opening of the twentieth century civilized man was practically limited to numerous habitable areas of the earth from which a living can be extracted. Anthropologists have contributed richly to our culture by studying the various communities of human beings, revealing the mores that evolved from the ways in which the peoples earned their living. Archeologists have dug up and delved into the records of extinct civilizations to recover for us the cultures of the peoples of the earth who are now dead. Historians have written the story of the growth and expansion of modern nations, and we know that complex commercial, diplomatic, and cultural relations between peoples are an interesting part of that story. But there is no evidence that, prior to our own generation, any human beings ever effectively used a submarine, an airplane, an aircraft carrier, an

underwater sound-detecting device, a gyro-pilot, a gyro-compass, a cyclotron, a megatron, a betatron, a radar, radio sending and receiving sets, an electron microscope, or an atomic bomb. Machines and implements such as these, and their name is legion, and many are equipped with intricate technical devices, are the instruments by which scientists have cracked the atom and significantly mastered the sea and the atmosphere. Within the last six years technologists have unbelievably enriched significant terranean experience by winning greater technological control over the earth. All this enrichment of ternary experience is the contribution of wartime engineering to civilization.

Examples drawn from quite recent technological developments of scientific knowledge in each of its three modes are needed to make the conception of ternary experience more concrete and definite. These examples are offered in support of the thesis that philosophy must now broaden its conception of man's experience of the aero-terraqueous globe to take into account this greatly increased control over land, sea, and air. It is true that many of the scientific instruments and inventions mentioned in these examples are adaptable for use in either terranean, or marine, or aerial experience, but in their entirety these examples show that ternary experience has now become a reality with which philosophers must reckon.

Let us consider first some recent enrichments of terranean experience. Excellent examples are found in the wartime technological development of atomic energy as presented in the official report made in the summer of 1945 by Professor Henry D. Smyth under the title, *Atomic Energy for Military Purposes*. A study of this report should be a "must" for every teacher of philosophy. Here is a single sentence which indicates how novel are the researches described in it in considerable detail. "Thus, by the end of 1942 plutonium, entirely unknown eighteen months earlier, was considered an element whose chemical behavior was as well understood as that of several of the elements of the old periodic table" (p. 102). This statement also covers neptunium. How neptunium and plutonium were separated from uranium by a process of simple radio-active transmutation, produced by neutron bombardment in

a lattice of natural uranium and graphite, how U-235 was separated from U-238 by gaseous diffusion and electro-magnetism, and how, since 1942, all of this led to the production of adequate quantities of U-235 and plutonium, the discovery of plutonium fission, the control of nuclear chain-reactions, and the invention of the atomic bomb, is described in the Smyth Report so clearly as to make it immediately evident that man's mastery of the hidden energies within the nucleus of the atom has now been definitely achieved. Indeed, it is an error to refer to the atomic bomb as a single invention, since thousands of complex inventions relating to it have already been patented. Undoubtedly, further attempts will be made to produce nuclear energies from other atoms than those which have yielded energy by nuclear fission. Already the betatron is a new invention which is being used to free mesotrons from subatomic particles.

Although the technological development of nuclear physics expounded in the Smyth Report contains the most significant examples of the expansion of terranean experience during World War II, many other examples could be given. Think, for instance, of the recent advances in medical science represented by the production and use of radio-active elements as tracers and in the diagnosis and treatment of diseases, of atabrine as a substitute for quinine in the prevention of malaria, of penicillin to prevent the spread of infectious diseases, and of sulpha drugs to conquer bacterial diseases.

Consider next how complicated and enriched our marine experience has become during the war years. Imagine a large fleet of American battleships and destroyers moving in battle formation from the Uluithi Islands to Okinawa to attack the Japanese who were entrenched in that island stronghold. The radar officer on the Admiral's flagship turns a button on the control panel of the radar, wave pulses are sent out across the ocean and they return and are duly registered in the radarscope of this marvelous instrument so as to indicate to the expert observer the presence of another fleet, composed of airplane carriers, so far beyond the horizon as to be invisible from the flagship of the fleet of battleships and destroyers. The radar tells the admiral almost instantly

how far the airplane carriers are from the flagship, how many of them there are, their speed, and other details of information which he needs, without his having to use radio communication that could be intercepted by the enemy. Using the radar, and other modern inventions, great fleets are thus able to move in close coordination and to fire their guns automatically even when separated by so many nautical miles that the ships are not visible to each other's crews. Enemy vessels were actually sunk by the guns of ships too far away to be seen even with highpowered binoculars and rangefinders!

In his excellent account of "The Great Victory of Leyte Gulf", Admiral Fletcher Pratt tells how a submarine commander gave Admiral Halsey his first information about the Japanese battle fleet. This information he got from his radar. Admiral Pratt says that the Commander "put their number, course, and speed on the air for Halsey's benefit",[3] before sinking two Japanese heavy cruisers, and forcing a third to turn back. Without the submarine and radar, the decisive victory of Leyte Gulf could not have been won! Thus the great enrichment of marine experience by improved submarines, radars, and other scientific apparatus, much of which is still a military secret, greatly increases our control over the seven seas.

Think, too, of the recent complication and enrichment of aerial experience. Imagine a pilot flying an airplane twelve thousand feet above the surface of the earth. Before him is the instrument panel on which are delicate gauges and other devices that tell him at a glance his altitude, the angle at which the plane is flying, the speed, the distance from the take-off and to the next landing field, the weather conditions surrounding him, and the flight conditions ahead of him. To the pilot, this is a unique objective situation quite different from any he ever confronted on land, unless it was in a Link Trainer devised to simulate flight conditions. Yet the experiences of an air pilot on routine flight are as nothing compared with those of test pilots doing flight research as described by Mr. Wolfgang Langewiesche. He tells us that test pilots are now carrying out elaborate dive programs, in which they let themselves be

[3] *Harper's Magazine*, Vol. 191, No. 1146, November, 1945, p. 437.

"sucked under" on purpose, and produce "shock stalls in various maneuvers—in steep turns, in pull-outs from dives, with various combinations of speed and altitude and centrifugal force". He explains that the preparation of a single fighter airplane for such dive tests requires months of work. And he concludes: "Almost a thousand pounds of delicate instruments, strain gauges, pressure gauges, photo-recorders must be crammed into its confined spaces. All this instrumentation must itself be first contrived, tuned up, and flight-tested. One airplane, making one dive every few days, keeps three men busy merely keeping the photo-recorders properly synchronized; several girls merely reading the photo-records obtained and transcribing them; and a whole staff of engineers to extract the sense and meaning: altogether many hundred man hours per dive."[4] Thus, this expert flight-research pilot describes extremely rich and complicated aerial experiences created by aviation research conducted in the atmosphere at near sonic speeds. Surely philosophers as well as engineers need "to extract the sense and meaning" of such aerial experiences as are here described!

That the aerial dimension of human experience will be enriched still further by prospective improvements in aviation is obvious. Aviation engineers predict that superplanes, using jet, or atomic-power propulsion, and ascending twenty miles into the stratosphere where air-resistance virtually vanishes, will each carry over five hundred passengers around the earth in less than twenty-four hours. It has even been predicted that robot freighters, with jet or atomic-power propulsion, will sail through the stratosphere at a speed of one hundred thousand miles per hour! This seems and may be fantastic, but certainly the exploitation of the aerial dimension of experience is far from its zenith.

Let us now consider an example of the integration of terranean, marine, and aerial experiences to achieve a specific objective. For this will at least suggest the vastness of the natural power that

[4] See the informative article in *Harper's Magazine, idem*, p. 400. See also an older (1941), but excellent technical discussion of aerodynamics: "Recent Advances in Aeronautics" by J. C. Hunsaker in *Science in Progress*, Second Series [Yale Press], edited by George A. Baitsell. How rich aerial experience has now become is indicated by the fact that Mr. Paul R. Hanna has prepared an *Aviation Education Source Book* (Stanford University Press), consisting of 1,400 pages.

organized and trained military forces are able to wield by such an integrated utilization of ternary experience.

In the island fortresses of Iwo Jima and Okinawa, the Japanese were so deeply entrenched that they were convinced of their invulnerability to any attacks by our forces. Nevertheless, within a month after our attack was launched on the eight square miles of volcanic ashes and sulphur known as Iwo Jima, practically the entire force of 25,000 Japanese had been wiped out, and our marines were in possession of that island stronghold. This accomplishment is unique in the history of warfare. It was achieved by the closely integrated and coordinated utilization of our control over the sea and the air to obtain control over the island land-mass. It involved skilled and daring manipulations of mechanisms and inventions embodying three kinds of power: ground-power, sea-power, and air-power. Airplanes; amphibious craft of all kinds, including amphibious tanks; battleships, carriers, cruisers, destroyers, rocket ships, minesweepers, and all other marine craft; heavy artillery, and a variety of ordnance and engineering equipment indispensable to a military operation on land, were all integrated in a prolonged and victorious attack. Scores of airplanes and over eight hundred different marine craft participated, every one of which was equipped with many technical instruments, and manned by personnel skilled in operating these instruments. Watching this engagement from the binnacle platform and bridge deck of the battleship U.S.S. *Arkansas* every day for over three weeks, observing what was going on through our highpowered rangefinders, and listening directly to the reports brought back by the pilots and "spotters", who repeatedly flew over the island to direct our gunners in their bombardment, it came to me, as an intuition, that I was a spectator of one of the most miraculous demonstrations of the coordinated and integrated use of man's ternary experience that has ever occurred in human history.

All of the above examples, including this brief account of the conquest of Iwo Jima, have been presented to clarify the conception of ternary experience. They make evident the inconceivable might of the natural power man now wields as a result of his technological mastery of land, sea, and air. Numerous other examples

could be given to prove that human experience of the aero-terraqueous globe is now definitely ternary experience, but these will have to suffice.

Now all of this enrichment of ternary experience offers a stirring challenge to any forward-looking philosopher because it cries out for logical and ethical interpretation. Here and now it is only possible to suggest four interesting epistemological conclusions, before turning to some ethical considerations. Since two are negative, let us state each of these before giving the two positive conclusions.

The first negative epistemological conclusion is that philosophers must reject an extreme monistic conception of scientific knowledge which tacitly assumes that the distinction between pure knowledge of nature and the technological development of that knowledge has no essential epistemological significance. Since both are called knowledge, no one would think of denying an identity of pattern for pure and technological knowledge. Nevertheless, it is an undeniable fact that, whereas technological knowledge has not yet been achieved for the quintessential realms, it has recently become richly complicated and is now highly effective in the control of nature within all three dimensions of the terrestrial realm. This important fact should be incorporated and utilized in natural philosophy. Undoubtedly man is faced with a geocentric predicament which makes it extremely difficult, if not impossible, for him to extend his technological knowledge into the quintessential realms sufficiently to achieve there the kind of mastery he has won within the aero-terraqueous globe. Yet facts are facts, and here is one which philosophers, who are interested in natural science, should not continue to neglect. It follows that when humanists talk about man enforcing his will upon cosmic processes, they should not forget that, great as man's technological control over terrestrial nature has now become, it is still only exercised within a speck of the physical universe. Indeed, we may paraphrase Newton's statement to say that natural scientists are even now merely playing with some of the atoms of molecules here on the earth, while the immense expanse of the quintessential realms lies before them wholly unexploited. The distinction between pure and technological knowledge, together with the restriction of the latter to the

aero-terraqueous globe, should at least suffice to keep philosophers mindful of how far scientists yet have to go to achieve complete control over physical nature.

The second negative epistemological conclusion is that philosophers must reject the classic conception of experience as a dyadic relation between one knower and one object, which he perceives, according to the empiricists; or categorizes, according to the Kantian epistemology and its successors; or satisfies his need by adapting himself to it, according to the geneticists and evolutionists. The overrefinement of this conception of human experience has filled many books with elaborate technicalities. And the point of view has usually been that of a terranean philosopher, scarcely acquainted with either marine or aerial experience, seated in a comfortable armchair, analysing some relatively insignificant individual perception of a particular physical object to sort out, name, and classify all the subjective constituents, and all the objective qualities and relations, that could possibly be detected or imagined as present in this cognitive situation. How utterly inapplicable this point of view is to the ternary experience of the aero-terraqueous globe as this now stands clearly revealed to us by the rapid advances that have been made by natural science! How inadequately it fits our complicated terranean, aerial, and marine experiences! How weakly it apprehends the might of the power we have in our grasp through the coordination and integration of all three forms of ternary experience!

Surely the time has come for philosophers to begin to take account of all the data from terranean, marine, and aerial experiences, as these have been made available in recent scientific research, as well as the possibilities inherent in their coordination and integration. Since the time of Plato, philosophers have claimed that they are the spectators of all time and existence, but in actual practice, they have made their epistemological analyses from the sole viewpoint of incomplete terranean experiences. They have been actually provincial in outlook, thereby contradicting in practice their own ideal of what a philosopher should be. Too often it has been tacitly assumed that such a terranean perceptual situation as seeing a patch of red, or a mirror image of a pin, or a piece

of wax, is 'the given' with which an epistemologist must start, since such situations are at least typical of all other cognitive contexts. And frequently it has also been tacitly assumed that all scientific knowledge has evolved out of that type. We should abandon this terranean provincialism, and this exaggerated emphasis on inconsequential experiences. It must be recognized that when a seaman or an aviator interprets the blobs of light on a radarscope, he is doing something quite different from discriminating a patch of color from its background and recognizing it as green.

This brings us to the first positive epistemological conclusion to be drawn from the conception of ternary experience. Cognition, as exhibited in recent technological discoveries, is a sociological phenomenon of a high order of complexity, rather than a simple subject-object relation. In order for a sailor to read the map on the radarscope he must understand reasonably well how the whole intricate mechanism of the radar functions. Hence a sailor equipped with the required knowledge to interpret what he sees on a radarscope is not, strictly speaking, an individual subject. He is a trained observer. He is the final result of a prolonged social and educational process which trained him to operate a radar and to interpret what he sees in a radarscope. And the radar is not an object in the meaning of the O of the classical S-O cognitive relation. It is a functioning technological invention of the highest intricacy and complexity, so valuable that the nature of its mechanism is still kept as a military secret. This means that it is the perfected product of many minds who conceived and built it, and a philosopher should never forget that their highly technical knowledge is built into every radar that is operating anywhere. It must be emphasized that the comprehension of the engineering knowledge embodied in such mechanisms as the radar requires a mind to grasp the sociological context, of which the machine is only a part, as a whole and in its wholeness. A technological knowledge-situation or context comprises a scientifically trained mind, or many such minds, interpreting and using a complicated invention which was created by many minds to discover what is going on in nature, and to control the forces of nature. Unless we clearly grasp this interpretative conception of knowledge, we cannot even begin

UMI

to comprehend what marine or aerial or terranean experiences are at the level of complexity these have attained within the past five years. Technological scientific knowledge is social. It is a highly cooperative enterprise. This is the first positive epistemological conclusion to be drawn from the ternary conception of human experience.

The second positive conclusion is equally fundamental. When the mind is seeking to control nature within the terrestrial realm, knowledge is concrete. It is the mind's penetration into a system of connections within a specific area, be it only within an atom of uranium. And it is the ability to use this system of connections which constitutes man's control over that area, as well as over other areas to which this particular bit of knowledge is applicable. Always it is concrete knowledge which enables man to achieve specific results in the technological development of theoretical knowledge. It is a significant fact that the scientists who worked on the atomic bomb developed only a half-dozen experimental piles consisting of uranium and the particular moderator and other constituents they used in each pile. And each experimental radioactive pile was concrete. A radar operator interprets a particular blob of light on the radarscope to mean one enemy cruiser, moving at a particular speed in a definite direction at a precise location eight miles away, and with this information the Captain orders his gun crews to fire, and they sink the cruiser. This is an example of accurate concrete knowledge. And all of the technological knowledge which the natural scientists have discovered, and which has so enormously enhanced man's power by giving him so much greater control over terrestrial nature, is concrete, not abstract knowledge; it is specific, not general; it is a collection of interrelated meanings functioning together in a system, and not an array of formal symbols; it is an implicative system, and not a perceptual judgment. The abstract formal aspects of technological investigations, which are basically essential, must be regarded as instrumental to the unfolding of a marvelous functioning system that is itself concrete. And this holds even though the objective order involved requires mathematical formulae for its accurate human symbolic expression.

Let us now discuss some ethical problems involved in the conception of ternary experience. For all intelligent people recognize that the vastly augmented technological control of the aeroterraqueous globe makes imperative the creation of an international moral order to secure a firmer ethical control over human nature. Indeed, when we take into consideration the total psychological, social, political, and moral effects of man's increased mastery over physical nature, the problem of the ethical control of human nature becomes all the more urgent.

Natural scientists are fully aware of this urgency. Professor Harold C. Urey begins a popular discussion of the situation created among men by the discovery and use of the atomic bomb with these words: "I write this to frighten you. I'm a frightened man, myself. All the scientists I know are frightened—frightened for their lives—and frightened for *your* life."[5] And speaking to a scholarly audience Professor Urey said: "Tensions will arise beyond anything that we can imagine. . . . We will live in fear, sleep in fear, and die in fear. We will be afraid, every time there is a disturbance in the international situation, that the atomic bombs will arrive before morning."[6] And Professor Albert Einstein closed his interview with Commentator Raymond Swing with these words: "Since I do not foresee that atomic energy is to be a great boon for a long time, I have to say that for the present it is a menace. Perhaps it is well that it should be. It may intimidate the human race into bringing order into its international affairs, which, without the pressure of fear, it would not do."[7] Here is the grim testimony of two of the greatest living natural scientists that the mass arousal of the emotion of intense fear is one of the socio-psychological consequences of the invention of the atomic bomb. Fear has spread with wildfire rapidity among all civilized peoples till millions are wracked with a tormenting dread of impending disaster.

Moreover, profound apprehension is not the only psychological change that is now affecting millions of human beings. Never before

[5] *Collier's* for January 5, 1946. Vol. 117, No. 1, p. 18.
[6] *Founder's Day Address*, Drexel Institute of Technology, 1945, p. 12.
[7] *Atlantic Monthly*, November 1945, Vol. 176, p. 45.

in recorded history has man's inhumanity to man been practiced on such a wholesale scale as during the last decade. The sadistic tendencies and criminal propensities of human beings have been permitted to express themselves in wholesale killings in organized and socially approved torture crematories. The most destructive war in history has taken its terrible toll. Numberless survivors suffer, torn by grief difficult to assuage. Many veterans and civilians are maimed or mentally ill. The burden of human sorrow is quantitatively far greater than at any other period in human history. Horror stories fill our newspapers and magazines. Juvenile delinquency is everywhere a problem as many teen-age youth give unbridled expression to their anti-social wishes and desires. In some regions, hatred and ill-will have been systematically inculcated for years.

Fortunately this wartime legacy of mass fear, persecution, torment, sorrow, hatred, distrust, and ill will, is offset and counterbalanced, to a considerable extent, by a hunger for affirmations, widespread desire for human betterment, and profound pity and sympathy for the oppressed. The resulting tense emotional condition of strain and stress, which today affects well nigh everybody, makes it difficult to disentangle the crux of the ethical problem generated by the recent rapid development of technological knowledge from confused sentimentalism, and fanatical propaganda. In the face of this difficulty perhaps the moral dilemma, which the scientists who did the research on the atomic bomb actually faced, is the best approach to a statement of this crux of the ethical problem implicit in ternary experience.

Being convinced that German scientists and engineers were engaged in similar research, allied scientists felt that they had no choice about carrying on their investigations. Frequently scientists working on the atomic-bomb project whispered to each other that the war would be won by the nation whose experts won this research race. Professor Smyth writes: "Initially many scientists could and did hope that some principle would emerge which would prove that atomic bombs were inherently impossible."[8] This statement clearly proves that many allied scientists actually feared to

[8] *Loco citato*, p. 224.

discover and to place in the hands of military leaders the control of the hidden energies of atomic disintegration, lest this technological knowledge culminate in a major human catastrophe. Let no one think that this is merely a casuistical moral issue. Actually allied scientists were confronted with an unparalleled and unprecedented ethical predicament. It can be stated as a question: Is it morally right to implement atomic energy to defeat your enemies, when there is real danger that unrestrained atomic bombing would destroy all mankind?

We cannot dispose of this ethical question simply by denying that thorough atomic bombing could destroy all mankind, nor by efforts to devise counterweapons, or to find new ways of concealment and protection to prevent such a fatality. The cautious statement of Professor Smyth answers these suggestions. He writes: "It is reasonably certain that there will be improvements both in the processes of producing fissionable material and in its use. . . . Should a scheme be devised for converting to energy even as much as a few percent of the matter of some common material, civilization would have the means to commit suicide at will."[9] Most philosophers would certainly agree that, when technological developments make possible the suicide of civilization, an ethical problem is created that is just as real as it would be if this suicide were actually imminent. But precisely what is this ethical problem?

If we name it the problem of the ethical conditioning of science, we must then ask: What does this equivocal term mean? Recall the distinction between the two major objectives of science: the pursuit of pure knowledge, and its technological development to control the primal forces of nature for human use. Now philosophers generally agree that pure knowledge is either one of the major intrinsic ethical values, or a basic ingredient in experiences that are judged intrinsically good. And on either alternative one could not ethically justify placing any limitation whatsoever upon the disinterested pursuit of scientific knowledge *per se*. Nevertheless, when we consider the objective of the applied sciences, some

[9] *Ibid.*, p. 224. In 1923 Albert Schweitzer wrote: "It is clear now to everyone that the suicide of civilization is in progress." ***Decay and Restoration of Civilization***, p. 3.

restriction is necessary and justifiable. The ethical principle that in the technological development of pure knowledge those implementations of natural power which would promote the common good are right, whereas those that would destroy it are wrong is probably universally acceptable among thinkers concerned with ethics.

Such a principle implies a definite restriction upon technological developments of scientific knowledge, and that is precisely what the ethical conditioning of science means. The ethical question for the research scientist is not, Is it right to discover the secret of atomic energy?, but, Is it right for a nation to use this discovery to perfect an atomic bomb with which to destroy its enemies, when this would involve placing in human hands the power to destroy civilization? This question was answered affirmatively, at least by implication, by those who were responsible for the dropping of atomic bombs on Hiroshima and Nagasaki. Postponing a commitment of whether this answer was right, let us accept the historic fact and state the question to accord with it: Should the use of atomic bombs as weapons now be outlawed, before the implied risk becomes a real liability? While it is not yet too late, a few years hence it could be.

Such an analysis of the issue which faced allied scientists reveals the crux of the ethical problem of the Atomic Age. There is wide agreement today among those most competent to judge that some way, somehow, technological science must be ethically conditioned. Whereas the withholding of technological improvements to protect vested economic interests can be judged unethical on the ground that such a practice is against the common good, the withholding of technological inventions that could be used to destroy all mankind is ethical because it promotes the common good. This means that technology is to be given the green light on all its developments which will promote the common good, but that the red light must be flashed whenever that development is known, by the experts, themselves, to be against the common good. Note that the term "common good" is used throughout this discussion to mean the good of all mankind, and not the good of some one national, racial, or cultural group.

There is, to be sure, a significant difference between having an atomic bomb and using it deliberately to destroy the entire human race, just as there is a difference between having a revolver and using it to commit murder. When the allied powers used atomic bombs at Hiroshima and Nagasaki, they did it to crush a ruthless enemy whose militarists had committed their people to an aggressive war that was against the common good. Now, since dropping those bombs quickly ended the most destructive war in human history, our ethical judgment is that the use of atomic energy in this situation was right because it definitely promoted the common good. Nevertheless, a restriction against the manufacture of atomic bombs in the future, and a decision to destroy those in existence, can be defended ethically by using the principle of the ethical conditioning of technology. Exactly how this conditioning is to be made effective is another one of those extremely difficult cases of finding the right means to achieve an ethical objective. If ethical conditioning is to be really effective, it seems essential that scientists themselves should administer it. The Atomic Energy Control Committee of the United Nations may be able to work out a satisfactory solution of this difficult problem, which will be supported and enforced by all the participating nations. Should this be done the principle of the ethical conditioning of technology would become embodied in international law.

The foregoing interpretation of the principle of the ethical conditioning of science does not entail approval of restraints upon the freedom of scientists to carry on pure research. Since the making of atomic bombs may result in the destruction of all mankind, it is proposed that enemy cyclotrons be broken into pieces and cast into the sea, and straightway this is done. Thus scientific investigation is curtailed, and this curtailment is justified by the dictum that only scientists of the victor peoples are to be permitted to carry on research! If scientists had been in charge of administering the ethical conditioning of technology, such a blunder would never have been made. It should be crystal clear that non-scientist representatives of political or military agencies do not have the moral right to interpret the principle of the ethical conditioning of science to mean that they possess the authority to impose the conditioning

on individual scientists or groups of scientists. For the only moral use of the principle is the prevention of those technological developments of scientific knowledge that are known by scientists to be inimical to the common good. It is ethically wrong to use it to justify hampering the freedom of scientists to conduct research. The ethical conditioning should be imposed upon science by scientists themselves, and then only after a consensus of opinion of experts. Otherwise the freedom of scientists will be endangered.

The traditional fundamental issues which have divided philosophers into separate schools belong primarily to the fields of epistemology, axiology, and metaphysics, rather than to applied ethics. It must be admitted that on such issues philosophers and teachers of philosophy are today as widely separated as are time and eternity. Indeed, realists, empiricists, and humanists are united in the conviction that idealists, theists, and personalists are so much concerned with the eternal grounding of human values that they have become practically indifferent to the threat of their utter destruction. And, on the other hand, idealists, theists, and personalists are just as firmly convinced that realists, empiricists, and humanists are so preoccupied with the work of salvaging human values from total obliteration that they have become wholly unconcerned about whether they are grounded in eternity. Important though it undoubtedly is that this basic antinomy in contemporary philosophic reflection should ultimately be resolved, perhaps during these fateful days that are illuminated and heated by the indescribable glare of atomic-bomb explosions, real and anticipated, discussions of it might appropriately be postponed till after our most urgent human affairs have been put into order, lest, Nero-like, philosophers appear to be fiddling while civilization burns.

Postponing awhile consideration of traditional disputes, and accepting as a working program the ethical goal of promoting the common good, all idealists and all humanists can unite with all other intellectual leaders, scientists, artists, and religionists, to meet the gigantic crisis in Western Culture and in all other cultures which the advent of the Atomic Age has made so ineluctably obvious. What all men want, what war-torn and atomic-bombed

humanity must have, is an international moral order the common good of which will be so unswervingly supported by all people of good intentions and aggressive actions, under competent and magnanimous intellectual leadership and guidance, that the threatened catastrophe of the suicide of all civilized life and a reversion to savagery will never materialize. Today is a day for harmony and concord among philosophers as well as among all intellectuals. It is a day when people everywhere of all races and creeds and all lands can and must be united in pursuit of the common good. And it is a day when it is absolutely imperative that the technological development of war weapons be ethically conditioned by this supreme and universal moral purpose.

Our great prophetic American philosopher, William James, suggested in *Pragmatism* the possibility of formulating a satisfactory ethical goal by synthesizing social meliorism and theism. He also warned that natural science might culminate in the destruction of civilization, likening modern man to a child drowning in a bathtub because he had turned on the water without knowing how to turn it off. Elsewhere James pointed out the need of a moral equivalent for war, an objective the pursuit of which would inculcate in men the virtues of courage, selfsacrifice, heroism, and prudence, which war evokes.

Since technology has already made ternary experience of the aero-terraqueous globe an actuality, it is now incumbent upon all intellectuals to function together in close integration in actualizing the ideal of the common good of all mankind, and the ethical conditioning of technology. Such a program can become the moral equivalent for war which William James envisaged. United in this worthy effort to realize such a dual moral purpose, people of the Atomic Age can create an era of peace and concord, of improvement and progress that will lift the human race to a higher level of cultural achievement than has ever before been known.

DANIEL SOMMER ROBINSON

The University of Miami
Coral Gables, Florida

METHOD AND CONTENT IN PHILOSOPHY[1]

AT this first meeting after the interruptions due to the war, it is natural that we try to look once more over the field of philosophy. The moment any comprehensive view is attempted, the field is seen to be marked by wide and probably increasing diversity. We find social philosophy and philosophy of science and axiology and semantics and philosophy of history and logic and philosophy of religion and metaphysics and philosophy of law and esthetics and mathematical philosophy and philosophy of literature and sometimes philosophy of life. In each of these specialized and sometimes isolated areas there are local divisions and differences almost without end.

Cutting through the field and its subdivisions are various major lines of cleavage, parting some of us on one side and others on another. Some of the lines of cleavage are not as sharply drawn or driven as they were a few decades ago. That between evolutionism and anti-evolutionism, for example, has almost disappeared. The line between realism and idealism is still traceable. That between theoretical and practical philosophies is now and then evident. That between theism and non-theism occasionally becomes conspicuous.

One of the lines of cleavage I wish particularly to discuss and, frankly, to do what I can to readjust. It is, I think, the sharpest line dividing contemporary philosophers. It leads to unfortunate misunderstandings, attempted ostracisms, and unhappy alienations on both sides. It is the division between the so-called critical and so-called speculative philosophies.

Let us admit that of course the division is not precise or abso-

[1] The presidential address to the Western Division of the American Philosophical Association at Chicago, May 10, 1946.

lute. Stated briefly and for the moment inadequately, the critical philosophies are concerned with the apparatus of knowing the world and determining the truth or falsity of our propositions concerning it; the speculative philosophies are concerned with envisaging the data, real or supposed, observed or inferred, in their more general, more nearly total, or primary, or ultimate aspects. In the nature of the case the critical philosophies are analytical, while the speculative philosophies are synthetic. The critical philosophies are microscopic, the speculative macroscopic. The critical philosophies are cautious, the speculative philosophies bold.

A generation or two ago when some of these now greying and balding heads encased ideas then judged appropriate for students, the critical philosophies were epistemological, with the good old difficulties of the real table, the bent stick, the mind-body problem, the content and implications of consciousness, the possibility of knowledge, and the conservation of values. Whether these problems were solved or not, now for the critical philosophies the center of gravity—or perhaps we should say, the magnetic pole—has shifted to phenomenology, positivism, and semantics, implemented by the techniques of symbolic or mathematical logic.

In the period before the wars, some of the speculative philosophies, including pragmatism, developed supernaturalist theologies and idealistic metaphysics, while others discarded these traditional views in favor of sweeping Spencerian or Bergsonian theories about nature. Certainly some of those hypostatic structures reared to support human values and aspirations were cloud-capped towers and gorgeous palaces. One reason why the critical philosophies have been so reductive and parsimonious is that the speculative philosophies have been so overstuffed and extravagant. Because of their past, and because of the disillusionment and discontent germane to our time, the speculative philosophies are now largely eclipsed, if not discredited. On the whole, and with some exceptions, where they flourish, they flourish by reiteration rather than by rejuvenation.

This cleavage between the critical and the speculative philosophies, as they are called, is not a mere difference of opinion. It is a difference of fundamental attitude. It involves basic principles

or presuppositions as to what philosophy is and what it is supposed to do. It divides us; sometimes it almost lines us up for civil war. If allowed to go to extremes, it is capable of paralyzing philosophy and rendering it sterile. Some of the defects indicated in the volume called *Philosophy in American Education* are directly traceable to it.

This is not the time or place for a detailed discussion, and hardly for a statement of partially supported conclusions, but let each of us ask himself some questions, and if he finds the answers that I think he will find, let him tell his students, for assuredly the answers are important for them. First, as to the so-called critical philosophies. Is it not true that any critical philosophy, if carried or driven far enough, can undermine its own standpoint, or can eat its own head off? Is it not true that a critical philosophy tends to be divisive and isolating, either because each advanced critic speaks his own language and elaborates his own symbolism, or else because sooner or later he plays around the edge of subjectivism, if not solipsism? (Sometimes, of course, the isolation is not that of an individual, but a more or less ingrowing group or school or circle.) Again, a question: is there not a misplaced emphasis when the traditional problems are treated in terms of a theory of language? Is not a theory of language, after all, as subjective as the epistemology of a former generation, with its emphasis on perception? Is there such a difference between the impression of what a man sees and the expression of what a man says? Have we made any great advance if instead of saying "To be is to be perceived", we say, in effect, "To be is to be talked about"? Again, granting a certain amount of good sense approximately evenly distributed among philosophers, should a proposition be declared to be meaningless, or a problem be said to be a pseudo-problem, because one happens not to be interested in a problem which interests some one else? Does a problem become a pseudo-problem because some one else gets a wrong answer to it? Once more, is an operationism which makes science depend on the constructibility of confirming experiments justified in claiming that its experiments are constructible before they have been constructed and carried through? Does not such a claim somewhere make for overconfidence in ex-

periments already performed or for overcaution in planning new experiments? Is not the goal of operationism, like that of any other experimentalism, to try to find out whether confirming experiments are constructible or not? And if this is the case, is not operationism as first defined a kind of short circuit in scientific thinking, not particularly impressive as a model for philosophy?

Finally, among the questions concerning the critical philosophies, is there any real grip on the world, or on anything that will help us get on in it, when definitions are made rules for the use of terms, and it is not specified whether it is the vocabulary or the reference of the terms which is conventional or arbitrary? Is science, then, with or without mathematics, merely a game for emancipated intellects to play? Does not all this, if consistently followed through, add up to technicality and futility?

On the other hand, now, some questions for the speculative philosophies. First, is it not true that they are overly loyal to traditions and reluctant if not timid about breaking with them? Again, have they not emphasized man and his mind and his institutions more than our more recent knowledge of the universe warrants? Once more, do they not bank too much upon the softer and more emotional elements of experience and take too long chances when they declare these to be essential in the universe, or responsible for it? Have they really met the issues involved in what psychology has shown about introspection, autosuggestion, and compensation? Have they not played fast and loose with concepts involving infinites, absolutes, and the "Whole"? Have they not, when hard pressed, insisted on their own interpretation of what is rational or intelligible, or taken dubious refuge in subtle dialectic, as if a universe could hang on a split hair? Finally, do they not in practice tend to avoid, and in theory gloss over, the problems imposed by the ghastly evils of our time?

These words, I fear, are not pleasant, but I believe they point to something serious for the future of philosophy. If our tribe is to be divided into two clans, one of which beats the drums of criticism while the other tends the smoke of speculation, there will not be much harvest from the fields!

I suppose that I have, as a first approximation, overdrawn the

picture of the cleavage. There are at least four minor considerations which help to relieve its sharpness. In the first place, it is obvious that both the critical and the speculative philosophies are badly named, or that the names have acquired unfortunate associations. Of course criticism may be positive as well as negative, constructive as well as destructive. Speculation, too, may be restrained as well as unrestrained, and may be to a considerable extent empirical as well as imaginative.

Second, we must all admit that, whether it is well named or not, there is real ground for the division. No one could, if he would, read either side out of the party or so define philosophy as to make it an exclusive club for either group. Third, most of us belong more or less in both camps. The two have much in common, or would have if on the one hand the critical philosophies thoroughly explored their primitive propositions or their contextual situations or their residual surds, and on the other hand the speculative philosophies ceased their overdrafts at the bank of human credulity, sometimes glorified by the name of faith.

Fourth, some of us may rightly protest that we are neither critical nor speculative, but that our interests are, for example, practical or historical.

With all these four qualifications, however, the cleavage remains and bodes no good for the future. It bodes no good, unless the genuine issue presented in it can be provided for in some other way, or envisaged from some more nearly adequate point of view.

I submit that what is really involved in the division between the so-called critical and speculative philosophies is an authentic and indispensable concern on the one hand with problems of philosophical *method* and on the other hand with problems of philosophical *content*. Some of us are more actively concerned with the one set of problems, others with the other; each of us, concerned with the one set and investing his life in it, is in human fashion likely to neglect, or minimize, or discredit the other.

The problem of the problems then is to find the proper relation between philosophical method and philosophical content—one may say, briefly and roughly, between epistemology, logic, and semantics on the one hand and metaphysics, ethics, and philosophy

of religion on the other. It will be noted that this rough enumeration omits philosophy of science; this is because of its peculiar difficulties. Philosophy of science is now largely preempted by theories of method, as if the content of the sciences were the concern of the scientists alone. I shall return to this point later.

The methods of obtaining knowledge have been described for many a sophomore as empiricism, rationalism, pragmatism and, some say, intuitionism. (I regard authoritarianism and dogmatism as societal attitudes rather than methods; the authoritarian depends upon some other man's rationalism, empiricism, etc., while the dogmatist spurns the methods and results of those who do not agree with him.)

Supposing that the methods are the four named, with some modicum of intuitionism admitted, it is noticeable that the methods square well with major psychological processes and data: empiricism with perception, rationalism with thinking, pragmatism with activity, and intuitionism with feeling.

Everyone admits of course that the four psychological processes are intertwined and are sharply distinguished only by the kind of dissection necessary for textbooks, and that all four of the psychological processes are indispensable. Probably most of us agree in principle that the same should be said of the four methods, that is, granting that intuition may, if anyone insists, be understood to apply only in immediate perception of ordinary objects, without including in its scope any of the so-called deeper or higher truths. The four methods are intertwined and in some sense indispensable. We all know Montague's suggestion of a federation of methods as necessary if we are adequately to know the world.

I suggest that the problem of methods may be profitably stated, not so much in terms of federation, a metaphor drawn from politics, as by the aid of two other metaphors or illustrative devices, the first from optics.

Optics affords us the oft used metaphor of a field of vision, with different perspectives as objects are seen from different standpoints. Several philosophers have made the illustrative device familiar in their discussions. With no particular reference to their work, let us say that the methods of obtaining knowledge are so

many standpoints, the points of view of various philosophers, and that from each of these standpoints the content of philosophy appears in different perspectives. There are many defects in the illustrative device; the chief among them probably is the fact that a man's "standpoint" is anything but simple and abstract. Any man's standpoint is correlated with, if not determined by, a thousand concrete conditions of experience, heredity, environment, and culture. Our bodies and minds, our parents and places of birth, our experiences, particularly as regards war and peace, our preferences and surroundings, are all in some respects different, and the differences are reflected in the methods favored in our philosophies. We all look, presumably, at the same world; some of us in the main observe it empirically, some interpret it rationally, some attack it in the aggressive pragmatic way, some get it with a certain immediacy which for them amounts to immediate certainty. Societal attitudes complicate our chosen methods, too. Each of us, whatever his principal method, accepts much from other men regarded as authoritative. Some of us occasionally charge some of the rest of us with dogmatism.

If anyone asks which is the "true" method, the authentic standpoint which will finally render the others untenable, the answer ought to be obvious enough. No one method is sacrosanct; like the corresponding psychological processes, each is inevitably combined with something of the others, and each should be tested by the others. Even those who insist upon one or another of the methods as the only one which affords knowledge are usually willing to admit that each of the others is somewhere indispensable for life. Knowing, after all, is an incident in living. Probably in unguarded or unprofessional moments each of us moves from the standpoint of one method to that of another, and sooner or later glimpses the world, more or less blurred, from each of them.

The methods of philosophy, by and large, melt into one another. So, at least to some degree, do the various theories of content, the "world-hypotheses". Pepper finds that every relatively adequate world-theory, developed from its own root-metaphor, is completely comprehensive; each has its own way of accounting for, if not always accommodating the others. In our metaphor, the various

perspectives overlap and shade into one another, in a series or group of dissolving views. We do not need just now to ask which of the world-views is true, or whether any of them is true; they may be only magic shadow shapes that come and go. The point, for the moment, concerns the dissolving views. Although sometimes difficult to see, this is fairly clear in one major instance.

Before I went in for my first talk with Gandhi, some of his friends told me that, since the pressure on his time was very heavy, I should put first the question which I was most anxious to have him answer. At the moment the question was: "Do you see any ground other than patriotism, that is, devotion to India, on which the Hindus and Muslims can be urged to unite?" Without hesitation he answered "Yes". He went on to say that they might unite on what amounts to philosophical ground. The Hindus, let us say, are monists; the Muslims are monotheists. Gandhi said: "*To me, monism and monotheism are convertible terms.*" Without probing his use of the word "convertible", we can see the point and cite his remark in support of our statement about dissolving views.

The Hindu, from his standpoint—on his side of the Persian Gulf, with his heritage from the Upanishads and his ultimate attainment of intuition—has seen the world in the perspective of a kind of psychological monism. For him, all Reality is One, and it has at least some of the attributes of spirit. The Muslim, on his side of the Gulf, with another heritage and with emphasis on other methods, has, like the Jews and Christians, envisaged the world in a monotheism, with a sharp contrast between God the Creator and the created universe. We must emphasize, however, that in the course of history neither view has kept altogether clear of the other. The Hindus on their side have qualified their non-dualism and popularly have modified their monism in doctrines of a great many gods, some one or another of whom may be regarded as temporarily supreme, or as a name for the Supreme One. On this side of the Persian Gulf (reckoning by way of Europe), the Muslims have had their Sufis, the Jews their Spinoza, and the Christians their Hegelians.

No philosophy has ever been more deeply etched, more firmly engraved, than has monotheism with its sharp contrasts between

God and the created world, and yet even monotheism has not been able to preserve its lines altogether intact. Unless crystallized in hard dogma, monism tends to break into monotheism, and monotheism tends to melt into monism. The two, even if not in the strict sense convertible, are at least mutually dissoluble. From one point of view there is a dualism, and God stands out majestically before or above the physical universe. Shift the standpoint or the focus a little, and Reality—perhaps *sub specie aeternitatis*—appears to be One.

This is not strange when we recall, first, that spiritualistic monism and monotheism have in common a pronounced emphasis on Mind, and then that our ordinary experience develops on contrasts, by first selecting and distinguishing objects against their correlative neglected backgrounds, only to let the distinction lapse as we respond to fresh stimuli or turn to new problems with their own selections and neglects. We cannot think clearly of either God or a created universe without employing some contrast; but we can in life as, let us hope, in politics, live in One World.

The argument so far is to the effect that the various methods, with all the complex social, historical, and psychological factors which enter into them or condition them, are essentially standpoints, points of view, and that in content the various philosophies, with all their sweeping generalizations, are like so many perspectives depending upon what point of view is used. The case of monism and monotheism is relatively clear. I should like to try to extend the argument further, to see how it works out with two other major problems of world content. The argument for a few steps now may seem weak, but I think even a weak argument may be significant in these huge problems and I shall try presently to strengthen it.

Let us look first at the philosophies of idealism and naturalism. Described too briefly and without qualification, idealism sees the world somewhat in Hindu fashion, as essentially Experience or Mind, while naturalism sees it as more or less complicated physics and chemistry. As to methods used, idealism has drawn heavily upon rationalism, although it can, like naturalism, claim to be

empirical in so far as empirical procedure is experiential rather than experimental. The idealist takes his stand upon his experience, in whatever way his experience is interpreted—introspectively, phenomenologically, intuitively, valuationally, or mystically. He says experience is ineradicable and essential, and, viewing the world in that perspective, at length, if he affirms anything objective, affirms the reality of a Larger Mind. Non-idealist philosophers find defects both in the standpoint chosen, a little too close to solipsism, and in the result attained or affirmed. In particular the naturalist, taking his stand upon the results of many thousands of experiments, finds the world, including mind, so nearly describable in terms of physics and chemistry and mathematics that he sees no evidence of a World Mind. Let us take for granted that we are past the extreme reductive naturalisms and may modify physicalism empirically to recognize levels of natural development of objects, each of which has its own properties, not more than, but other than those of its constituents taken separately.

As a philosophy of content this type of naturalism, although still scattered and somewhat inarticulate, appears destined in the Western world to supplant the idealism which in the past has meant so much for art, for ethics, and above all for religion.

For the questions at issue between idealism and naturalism it seems weak to suggest that if a philosopher changes his standpoint one of these views dissolves into the other. The standpoints are too contradictory; they are too tenaciously held and for the one side as for the other the arguments are too conclusive. In this problem I do not take much stock in "the meeting of extremes in contemporary philosophy". Whether extremes meet or not, we can not very well say that the world is a Mind and not a Mind, or that it shifts now and then from being the one to being the other.

Evolutionism, with its suggestion of transitions between the two, is sometimes hailed as a solution of the problem. The word is of course used loosely, but indications multiply that it stands for a real process or processes in nature where developments can be ascribed mainly to inherent causation. If we study the data we find indications that there have been an evolution of matter, an evolution of living organisms, and an evolution of mind. But such

evolutionism, given the benefit of several doubtful decisions, if it is meant to indicate a passage from the non-mental to the mental, and is not obscured by a panpsychism or captivated by a pragmatism or a philosophy of values, and is not supplemented by traditional idealisms or supernaturalism, fails to find for mind any established status in the universe.

In this comparison of various philosophical standpoints and passage from one to another, I hope that now, in the tradition of presidential addresses, I may ask you to tarry for a few minutes at a standpoint which I adopt for mine.

At the standpoint of evolutionary naturalism I think there should be what I may call a slight shift, or better a sharper focus, which will make the universe look more like a Mind than either evolutionism or naturalism can ordinarily see it to be. This sharper focus is, I believe, attained when detailed empirical study of the natural data, level by level, discloses that over and over the data exhibit the same general principles of structure and process, so that, to cite a few examples almost at random, atoms are in their individuation, interactions, reproductions, and integrations, like cells, and both are in principle like reflex arcs. Similarly, astronomical bodies and multicellular organisms and neural patterns are in these fundamental characteristics alike, and also like many other things. Without extravagance or exaggeration, atoms, after all, are in general principles of structure and process like solar systems, and societies, although they are not organisms, are like organisms. Such resemblances are legion, and well merit systematic empirical study.

There are broad, sweeping resemblances, too. It turns out that matter and life and mind, although in complexity and quality quite different, are in their structures and processes similar. By a regular succession of processes, especially interactions and integrations, the inorganic world mounts or spirals up from level to level until the similar little world, the microcosm, of living forms begins to be deployed within it. Again, the living forms, by their interactions, reproductions, and integrations, mount or spiral up until in some of them the nervous system is deployed and in its

processes of mind, its reflexes, patterns, sentiments, and valuations, again recapitulates or epitomizes the cosmos. The whole realm of matter, while of course it has its own characteristic properties, is in basic principles like the realm of life, and both are similar to that of mind.

It has sometimes been said that this work depends too much upon a method of analogy. To this it may be replied first that the common cautions against analogy are written for sophomores, and that the ordinary caution can become a stereotype for any philosopher who refuses to understand the world. Second, as Pepper says, metaphysics depends upon certain great analogies or root-metaphors, and some of them may be relatively adequate. Third, the analogies here relied upon are very detailed and very comprehensive throughout the data of the several sciences. Fourth, if it be thought logically weak to say that matter and life and mind exhibit analogies, we may in the language of advanced logic say that matter, life, and mind are respectively systems exemplifying a system-form.

Let us suppose, for the sake of an argument which might rest upon a much more extended treatment, that there are such resemblances. What are some of the consequences for the problem of idealism and naturalism? On the one hand, it begins to appear that the physical world is not, as idealism makes it, mind's phenomenon or construction or slave; it is, as naturalism says, mind's foundation and matrix. On the other hand, the physical world is not, as various non-idealist views have it, a neutral stuff, or a mere flux. It is not merely a colossal upsurge out of primordial depths, blowing itself here or there in a random evolution, a maelstrom of cosmic weather. Man and mind are no byproducts or accidents, but are in a sense the universe over again. The structures and processes of mind are like the structures and processes of the other parts of nature; in structure as well as in process and function, mind is a re-presentation of the world. The universe runs through its majestic measures, and, as in a great symphony, the theme repeats.

In other words, mind has not merely locus in the universe, but also status. This is idealism, as one might say, seen the other way

round, holding the large end of the telescope to the eye. The world, thus seen, is not a Great Mind, but the mind is a little world. Idealism is partly right: there is a resonance, if not a kinship, between mind and world, which ordinary evolutionism and ordinary naturalism overlook. This resonance and kinship, I think, is part of that more profound and centralizing conception of man in nature, which, as Gotshalk has recently written, is needed to give weight and energy to naturalism's program.

It is, we said, relatively easy to apply the illustrative device or metaphor of standpoints and perspectives—method-standpoints and content-perspectives—to the problem of monism and monotheism. It is more difficult in the problem of idealism and naturalism, but something can be accomplished by sharpening the focus to show that nature and mind have basic resemblances along with their differences. Before we leave the metaphor of perspectives let us try to see what it may do for us in another major problem, that of naturalism and supernaturalism.

"The problem of supernaturalism." The words sound almost strange—to some, because they hardly allow themselves to think that supernaturalism could or should ever be challenged or stated as a problem; to others, because they wonder that philosophy can be any longer concerned with such an outmoded world-view. Still others who take neither extreme position find supernaturalism so encumbered with dogma, so shot through with superstition and magic and infantilism and myth and compensation and projection, that they are half ashamed to be found anywhere near it. In recent years the scholastic supernaturalism has been persuasively restated, notably in the work of Maritain, but with all its attractiveness remains essentially a restatement. For an outsider, the old difficulties remain; there is still the familiar dependence upon authority, and the unquestioning acceptance of logical and metaphysical presuppositions which, in spite of the claims made for them, are open to various forms of challenge. Among the Protestants, in the work of Barth and Niebuhr, the doctrines of the supernatural have been restated in modified form, but sublimated to leave such a distance between divine glory and human gloom that

only a paradoxical revelation along one narrow historical and cultural channel gives us true religion, and this religion is defended by a philosophy which whenever pressed, can be conveniently removed beyond the reach of reason. The liberal Protestants, for the most part, are liberal in their interpretation of the Bible, but offer no basic revision of supernaturalism. The result is that many men in philosophy not only continue to disparage the traditional views but are not at all convinced by the reformulations.

Looked at in any way we can, this alienation between supernaturalism and other philosophies marks a serious situation. Nothing creates a wider gap between most of the universities on the one hand and the homes, churches, and theological seminaries on the other. It is bad for homes, churches, and seminaries because it makes difficulties for really free thought. It is bad for other philosophies because it cuts them off from a great portion of their heritage. With all the criticisms of the old views admitted, and with all sympathy for a resolute humanism which proposes to press on without them, something goes out of our world when supernaturalism is abandoned. Generations of men lived sincerely by those faiths and died steadfastly in them. Granting that there was much pathetic fallacy about it all, and with or without the emotive appeal, is it so certain that those long generations of prophets, saints, pilgrims, martyrs, reformers, teachers, heroes, and humble worshippers could not have been partly right, rather than wholly wrong?

Supernaturalisms have collapsed before, and gods have died. When it happened in Egypt and Babylon, what remained was for soothsayers and archaeologists. But when it happened for the immortal Greeks, for our intellectual forbears, the Greeks refused to drift into the dust. They opened their eyes and looked at nature, and at the human mind, and at human society, *afresh*. Empiricism and rationalism, an honest examination of the facts and careful consideration of the principles, these are also in our heritage. We are debtors both to the Jew and to the Greek.

Suppose, then that with supernaturalism, in spite of its insistent restatements, in our day showing signs of collapse, we refuse to be bewildered, or caught as even the Greeks eventually were, in

a failure of nerve, but that we open our eyes and with our microscopes and telescopes, and logic, and mathematics, look at the world in our day and with our methods, afresh. Is there any help from our argument about standpoints and perspectives, methods and content? There is, I think, a little that can be presented briefly, to say nothing of much more that would need long detail. First we should go back to what was said about sharpening the focus of naturalism, to detect the basic resemblances between matter and life and mind. Then, with these granted for the sake of the argument, we should look at the statement sometimes advanced by idealists to meet the challenge of naturalism. Sometimes they say: "Nature has produced life and mind: very well, let us estimate nature not at its lowest, but at its highest levels of achievement." We could not share this view of the idealists; mind, we thought, should not be claimed for nature's lowest levels, even in the attenuated form given it by panpsychism. What is needed is not an extension or projection of mind downward, but a recognition of the basic resemblances which obtain throughout all levels and offset the differences between the lower and the higher developments. This argument of the idealists, precarious when the attempt is made to make the world a mind, is of direct help in the problem of supernaturalism. Mind is, as we indicate by a word open to objections, "higher" than matter. Literally we mean more inclusively integrated, more affected by factors of valuation, more intimately ingrained in what we are. I use the word "higher" because we can easily pass from it to the word "superior", and this word, again, affords us a verbal association with the word "supernatural". For the moment, a verbal association is all we need. With or without the association, *the supernatural is the superior-in-nature.* This may recall the view of Woodbridge, that something of supernaturalism should be retained or reclaimed in order rightly to estimate man in nature. The supernatural is nature, let us say, on the way to and in its most complete stage,—in Aristotelian language, perhaps, not quite pure actuality, but the progressive actuality of its potentialities. I believe with Matthew Arnold that there is a Power, or with Bergson that there is

an *élan*, or with Samuel Alexander that there is a Nisus, in the world of matter and life and mind, a power or process in nature and in history which gradually makes righteousness, gradually, as Wieman says, makes value, or as we might say "makes good", flowers out in more highly integrated, purposeful personalities and more unselfishly integrated societies.

I would amend, and I think strengthen the views of the men just mentioned, by claiming that the process which makes good is, again, no random upsurge, no wild explosion of energy or scattering of a spray of value; it is much more regular, much more systematic, much more articulated than that. The basic principles of structure and process appear again and again in matter and life and mind. In the great symphony, we said, the theme repeats. In man, the new rendering in the more delicate instruments is supported by the surge and thunder of the others. Man is not left alone, in cosmic isolation. Man is a microcosm, the great universe over again, the cosmic theme with another instrumentation.

I do not see in this philosophy of religion a good which is absolute or unqualified or pantheistic. The process which makes good has to make good against inertia and opposition and evil; it makes a difference in the outcome whether we line up with it or against it, and it makes a difference in us, too. What is superior in man finds support in what is superior in nature.

I do not say that the superior in nature is personal, certainly not as we are persons; this would be likely to lapse into some form of childhood's "Big Man in the Sky". I say that nature apart from us in its essential structures and processes is at least like us, and enough like us to support what is best in us. In accordance with such a view the traditional personalistic doctrines can be discarded or variously reinterpreted.

We need not hesitate to say that what is superior in nature is material, or even mechanical; this, in fact, is what we should mean by spirit, and the spiritual. Spirit does not mean some ghostlike state or being apart from the natural world; such notions belong, if anywhere, to spiritism. For a supernaturalism freed from superstition, spirit is highly developed matter—high test matter,

hundred-octane matter, matter refined and purified. It is nature which has become superior. Spirituality is high-test personality in us, as we, too, begin to attain our best.

Thus, I would argue, the differences between monism and monotheism, between idealism and naturalism, and between naturalism and supernaturalism, may be interpreted as differences of perspective, and to a considerable extent may be resolved by shifts in method and point of view. The illustrative device from optics has some obvious defects, but the argument need not depend on it; everything that I have said can be said in clearer fashion by the aid of another illustrative device, this time from geometry and physics. A high abstraction, if apt, may afford a better grasp of concrete situations. Let us speak then not of perspectives but of partitionings of a manifold.

We are familiar enough with the ordinary procedure of locating a point in space by reference to three coordinate axes, and most of us can manage without too much struggle to extend the principle to a fourth axis, that ascribed to time. Any point in the universe can be located in space and time by reference to four such coordinate axes. So long as the axes are stationary or the frame is fixed, or the axes are in some sense basic for the cosmos, there is no difficulty. But suppose this first set of axes is in motion relative to another set. Then the problem of localization and measurement becomes more complicated; it involves a "transformation of coordinates" which makes a new set for the time being basic or definitive and assimilates the old coordinates in the new frame. Now go further; suppose all the possible sets of coordinate axes are in relative motion, or subject to some other condition so that no one of them can be said to be basic or preferred. What then? Well, those of us who are laymen in these things know a little of what the mathematicians say. Using the so-called tensor calculus, they can state certain problems independently of particular coordinate axes, and they can find answers which are adequate to the problems as stated. This procedure does not answer all the questions involving particular axes, or local distances and times; but it does afford a kind of over-all view, a field theory more

comprehensive than any merely local measurements. Each local measurement is in a way abandoned, and still it is a component of the tensor in the general problem and its answers.

Let us recast then in this new illustrative device our statements about methods and contents. Each method is a kind of point *O* or origin for a set of coordinate axes—each philosopher's method is determined by his social, historical, perhaps biological or even economic, certainly by his psychological "axes", normal or abnormal, right or "wrung". The content of his philosophy is a set of measurements or estimates of the world, taken from that point *O*. He partitions the manifold one way, his neighbor or colleague or opponent partitions it in another.

Which is the true view? Well, which is the basic set of coordinates? The illustrative device familiar in physical relativity can be brought over to the field of logical relativism. We hear often that truth is unattainable, that the quest for certainty is futile, and all we can hope for is probability or confirmability. Let us accept all this, not like torch singers but more like stoics; let us accept relativism, but broaden it out. Each of us has his standpoint, his perspective, his point *O*, his partitioning of the manifold. I have mine, some of which I have described: you have yours, for the moment pent up within you. Which of our views is true, or let us say, most probable, and to be preferred? Again, which is the basic set of coordinates?

There is a sense in which, for the time being and in the present state of our knowledge, this is not the most important question, because it is not the over-all question; it is not the tensor problem. Long ago in American politics, men began to see the signs of an irrepressible conflict coming about slavery, and some appealed to the Constitution. But Seward had the courage to stand up and say: "There is a higher law than the Constitution." So now, in a sense, there is a problem more comprehensive, more tensor-like, than the problem as to which of the various philosophies is true.

Over and over the question is asked in these bewildering years, What is the place and function of philosophy?—not of any particular philosophy but of philosophy over all, philosophy as a discipline, philosophy as a subject to be taught or imparted from

teacher to student? Philosophy, I would say, philosophy over all, is the tensor of which the particular philosophies, methodologies, world hypotheses, social programs, yours and mine, specialized, restricted, local, often narrow, are the components. Let each of us go on, as he will, sharpening the focus, cultivating his own garden, developing his own specialty, but let each of us remember that there are more things in philosophy than are dreamed of in his earth, or in his heaven, if he has one.

For philosophy thus inclusively construed, several consequences follow: I summarize them in a few sentences.

First, with all its divergences of methods and contents, philosophy must confront the universe, and never abandon that confrontation, which is our privilege and office. No one else can do that work, no scientist, no religious genius, no artist, no political or economic leader or reformer or organization. At most these can only share, and be welcomed to share the task. Philosophy has to confront the universe, not hide from it, or try to gloss it over, or explain it away, or see it merely through traditional eyes, or try to convince ourselves and others that it does not matter. We must look to the universe for structure and system and sanction—to the universe first, and to the Vedānta and Thomas Aquinas and Hegel afterward. The universe (I would say the universe of nature) is our common ground, our all-inclusive manifold.

Second, a philosophy of the sciences should cultivate not merely method but content. Agreement as regards methods, even if attainable, does not automatically solve the problems of content, or secure a unified science. It is one thing to develop methods; it is another thing to apply them on a comprehensive world-scale. Methodologies polish the pieces of the jigsaw puzzle; there is still the task of putting the pieces together into a coherent and consistent picture. This task cannot be left to the scientists, for the scientists are specialists, and such a task if left to specialists will never be performed, except here and there in a borderline field like biochemistry or psychosomatics. The broad task is a task not for specialists but for "generalists".

Third, a comprehensive philosophy will find more room in the

Western world for contributions from the great world-systems developed in India and China and Islam. This is implied in what was said above concerning idealism, naturalism, and supernaturalism. The first and the last of these are familiar enough in this connection; a word of special emphasis should be accorded the philosophies of China, where Confucianism and Taoism, properly understood, are complementary, the one emphasizing man in the frame of nature, the other emphasizing the frame of nature which all but overwhelms man. Both are, in principle, naturalistic, and even in their ancient versions can contribute background and cultural tone to the empirical and often fragmentary naturalisms of the West.

Fourth, when philosophy is taken comprehensively, it approximates the range and concreteness of living, and so the social philosophies come into their own. They are often said to be loose; this is a condition of their comprehensiveness. A more pertinent criticism is that they tend to make for a kind of contracting universe, as when Dewey virtually neglects the cosmos for the environment. The Russian dialectical materialism has at least this to be said for it, that it claims the sanction of a cosmic principle, although it derives the principle from Marx and Hegel rather than from electrons and protons synthesized in hydrogen, atoms of hydrogen and oxygen synthesized in water, molecules of water and carbon dioxide synthesized in formaldehyde, and so on. Hegel and Marx were born too soon. What if they had known modern chemistry! In the universe there are plenty of examples of the dyadic or triadic formula, but there are also other, more inclusive types of integration. Polyadic molecules were formed aeons before the United States of America or the Union of Soviet Socialist Republics. In these very days the nations are struggling, vibrating, oscillating in the first steps of a new integration in the United Nations. Integration is not merely a political principle; it is a cosmic principle. Some of the stars in their courses fight for it. Everywhere it needs to be detected in social, economic, and political data and recognized and served as an ideal for ethics.

Fifth, a truly comprehensive philosophy may adumbrate and begin to suggest a truly comprehensive religion. The great reli-

gions, too, or, more accurately, their theologies, are partitionings of a manifold—the same old manifold, the universe—common to them all. In a planetary culture, the old walls behind which the adherents of each particular religion huddled, or on which some sat and looked down on others, or through which many a devoted missionary tried to force his way, are bound to crumble. In their place eventually we shall have one landscape, whether it is garden or rubble. With a comprehensive philosophy, we shall be able to press toward the ideal set for us by Professor Pratt, that it is the function of each of the great religions to bring out the best in the others. Perhaps we may come at last to the fulfillment of the verse of the Bhagavad Gita, where the Blessed One says: "Whatsoever deity any man wishes to worship with faith, to him I render that faith steady."

GEORGE P. CONGER

The University of Minnesota

PROCEEDINGS OF THE AMERICAN PHILOSOPHICAL ASSOCIATION

May 1, 1945 to May 11, 1946

NINETEENTH ANNUAL REPORT OF THE BOARD OF OFFICERS

AMERICAN COUNCIL OF LEARNED SOCIETIES

The twenty-eighth meeting of the American Council of Learned Societies was held at the Westchester Country Club, Rye, New York, January 24–25, 1946. Members of the Association present at the meeting were: C. J. Ducasse and Glenn R. Morrow, delegates of the Association; Cornelius Krusé, Secretary of the Association; and Richard P. McKeon, delegate of the Medieval Academy of America. Arthur E. Murphy was elected a member of the Advisory Board for a term of four years.

During the past year the Council continued its plans for the preparation of a history of science in America; and for a series of volumes on the impact of the war on American life. Work was also continued on the Russian-translation project, on the Linguistic Atlas, and on the intensive-language program. The War Department has recently released to the Council all rights in language materials produced through the cooperation of the Army and the Council's Committee on the Intensive-Language Program. The texts, dictionaries, and phonograph records thus put at the disposal of the Council will be a source of considerable income when arrangements have been made for their commercial publication and sale. It is planned to devote this income to a peacetime linguistic program, to include the encouragement of intensive courses in unusual languages, teacher-training in unusual languages, instruction in languages not normally available (such as Burmese, Thai, Malay, etc.), the promotion of language study in secondary schools and promotion of research in the more important underworked linguistic fields.

Newer projects under consideration by the Council during the past year included a proposal by Dr. Fritz Saxl of the Warburg Institute for an Encyclopedia of the Middle Ages and Renaissance; a project for the preparation of an extensive Encyclopedia of Music; and a proposal for a volume of articles on the program of the humanities in the United States between 1939 and 1945, designed especially to serve the needs of foreign scholars who have been out of touch with us during the war. The Council has continued to sponsor conferences on the place of humanities in education, and has also participated in a conference with the National Park

Service concerning better use of the historical materials in the custody of the national parks. The Council is hoping to obtain funds for an expanded program of fellowships to assist in the discovery and development of research and teaching personnel, and for training experts in specialized areas.

The Director of the Council, Dr. Waldo Leland, was a member of the United States Delegation to the London Conference which drafted the Charter of UNESCO. Mr. Mortimer Graves, the Executive Secretary, appeared before the congressional committee which is holding hearings on Senate Bill 1720 to urge the inclusion of aid to the humanities in any program of federal aid to research.

These various activities show the important role the Council is playing in furthering the interests of liberal and humanistic studies. The Council considers itself as "a sort of general staff of the humanities, charged with gathering and analysing information, planning strategy, taking appropriate initiatives, stimulating useful activities, and striving always to perform the greatest possible services to mankind and to its intellectual welfare through the discovery and dissemination of useful knowledge". During the twenty-six years of its history it has received and disbursed approximately $6,000,000 in the furtherance of these purposes. Those of us who are in close touch with the work of the Council feel that it is entitled to the lively interest and hearty support of all the constituent societies.

GLENN R. MORROW
C. J. DUCASSE

COMMITTEES

Permanent Committee on Bibliography

I. Requests for bibliographies were received from and supplied to the following: O.W.I., University of Delaware, Pratt Library of Baltimore, Prof. Balz. Several minor lists of references were also supplied to various persons by Mr. Buchanan.

II. At the request of the American Library Association and for the use of the International Relations Office Mr. Buchanan prepared a list of philosophical publications in the United States during the years 1939–44. The list comprised over 350 titles and has been published in part in a booklet issued by the American Library Association.

At the request of the Cultural Relations Division of the State Department and for distribution in Latin America a list was prepared of 30 important philosophical works published since 1890 in the U.S. This list has proved useful for other purposes and has been sent to several libraries and other institutions which have desired information on American philosophy.

III. From the Library of Wesleyan College, Macon, Georgia, came a request which we were unable to meet satisfactorily and which presents a problem worthy of consideration by this Association. The request was for a list of several hundred titles which would constitute a good (or perhaps minimum) working library in philosophy for a typical liberal-arts college. Such a list, if it could be prepared, might prove generally useful, but its preparation would require a competent professional staff and a substantial subvention.

IV. The International Bibliography of Philosophy sponsored by the International Congresses of Philosophy and the International Institute for Intellectual Cooperation, published at Paris until the war stopped it, has been revived, and

its director Prof. Bayer has requested the continued cooperation of this Association. Both he and your Committee on Bibliography express the hope that a comprehensive bibliography will be undertaken by UNESCO. We are informed that plans for such an enterprise, which will include philosophy as one of its branches, are already under way. Meanwhile we recommend that this Association cooperate with the editors of the International Bibliography at Paris. The office at Paris is now prepared to cover all periodical literature beginning with 1946. Mr. Buchanan is prepared to supply that office at regular intervals with book titles from the U.S. publishers. Prof. Bayer has, however, requested our assistance in preparing a single volume covering both books and articles for the years 1939–1945. To meet this request may be difficult. Mr. Buchanan can supply the U.S. book titles readily enough, but whether Prof. Kuhn of the U. of N. Carolina can provide the periodical titles for these years, as he did before the war, is doubtful. It seems to your Committee that even at the cost of employing clerical assistance this Association should do its share in preparing the 1939–45 volume.

If this recommendation is sustained, your Committee requests the appropriation of not more than $300.00 at the disposition of this Committee to meet the obligations imposed upon its staff.

This Committee finally recommends that Mr. Emerson Buchanan, who is operating as the American representative of the International Bibliography, be added to your Committee and be appointed as its secretary.

For the Committee,
C. J. DUCASSE
H. W. SCHNEIDER } *Chairmen*

Publication Committee

Professor Gregory D. Walcott, General Editor of *Source Books in the History of the Sciences*, has sent in the following report on his series:

A somewhat more encouraging report is possible, now that the war is over. The McGraw-Hill Book Company has indicated that they will begin the publication of the *Source Book in Greek Science* by Cohen and Drabkin in the spring or early summer of 1946. Professor Allen of the University of Wisconsin has made considerable progress during the last year on the *Source Book in Botany*. Dr. Hewitt G. Fletcher, Jr., who is on a two-years' leave from the Massachusetts Institute of Technology to "work at the National Institute of Health" in Washington, D. C., thinks that he will get considerable time to continue his preparation of the manuscript for a *Source Book in Chemistry*, already one-half or two-thirds completed. Dr. T. S. Hall of Purdue University has taken up the work on the *Source Book in Zoology*, where Professor Smallwood left it because of ill health. All this gives a more roseate outlook than it has been possible to report the last two or three years.

It is also worth while to note the number of copies of each of the books on the market sold up to July 1, 1945. The *Source Book in Astronomy*, 2,480; *Source Book in Mathematics*, 3,418; *Source Book in Physics*, 2,483; and *Source Book in Geology*, 1,439. These figures, approximating 10,000, seem to show conclusively that this series of books is meeting a real need.

At the beginning of the year the committee had one manuscript under consideration and three others were received during the course of the year. Of these four manuscripts, two were regarded by the Committee as not suitable for a recommendation for a grant in aid of publication, one was withdrawn by the author

for publication through other channels, and one is still under consideration by the committee.

The committee wishes again to thank those members of the Association who have assisted in the work of the committee by reading and reporting upon manuscripts.

For the Committee,
GLENN R. MORROW, *Chairman*

Carus Lectures

At the last meeting of the American Philosophical Association, held at the University of California, Berkeley, Professor C. I. Lewis of Harvard University presented two portions of his volume of Carus Lectures shortly to appear under the title of *An Analysis of Knowledge and Valuation*. The themes discussed by him in the lectures which he delivered on the afternoons of December 28th and 29th were "Inherent Value and the Esthetic" and "The Moral Sense and the Active Life".

There has been some delay in the publication of the preceding series of Carus Lectures. The Committee has been assured, however, that this volume, prepared by Professor Morris R. Cohen, will be available this coming autumn.

The Carus family has pledged its support of a further series of lectures and the Carus Lecture Committee is therefore beginning the work of selecting the eighth Carus lecturer. Suggestions respecting the person to be given this honor and responsibility will be welcomed by the Committee.

EDWARD L. SCHAUB, *Chairman*

Report of the Delegate of the American Philosophical Association to the American Association for the Advancement of Science to the Secretary of the National Board of Officers of the American Philosophical Association, recording the background and achievements of the APA-AAAS association at the St. Louis meeting, March 27–30, 1946.

I have the honor to submit the report of the aforementioned subject-matter. This report falls naturally into two main parts: the background of the meeting and its accomplishments.

My appointment by your Council as its delegate to the AAAS began in 1939. At the time no specific meeting between members of the APA and the AAAS existed. The entire field had to be prospected. It seemed wise therefore to attend the meeting of the AAAS which took place that year in Columbus, Ohio. At this meeting it became evident that Section L provided the most natural meeting place for the philosophers and scientists. At the same time this Section was composed of so many miscellaneous groups with such diverse interests that a continued relationship from year to year was out of the question because of the need for allowing so many different groups in Section L to have part of the program. The Secretary of the AAAS, Dr. Moulton, was however most cordial and positive in encouraging joint meetings of our two societies, and in assuring us that rooms would be placed at our disposal for such meetings. It seemed wise also to attempt such a joint meeting in the following December when the AAAS was to meet at

Philadelphia. Your delegate returned immediately to the meeting of the Eastern Division of the APA in New York City to place this proposal before the Division and to recommend that the Eastern Division of the APA hold its meeting in Philadelphia at the same time. The matter was referred to the Executive Committee of the Eastern Division. This committee finally approved after several months of correspondence and deliberation. A committee was appointed, composed of the Secretary of the Eastern Division, Professor Mandelbaum, Professor Arthur O. Lovejoy, and your delegate. Because of the emphasis upon science and society in Section L at the time, and the brief period placed at our disposal at the Philadelphia meeting, it was decided to hold but one symposium and this on the topic Science and Values. Professor R. B. Perry, Professor W. M. Urban, and Professor Frank Knight read the invited papers in this symposium, with both scientists and philosophers also invited to discuss these papers and the issues involved.

Following this meeting and the coming of the war nothing of significance happened between our two associations with one important exception.

Dr. Raymond E. Seeger became the Secretary of Section L. Also within the AAAS a revision of its organization and constitution was under way. Dr. Seeger worked and others in the AAAS moved in the same direction to have the title of Section L changed to The History and Philosophy of Science. One of the official accomplishments of the recent St. Louis meeting was to ratify the new constitution and thereby establish this change.

This alteration is important because it removes a previous weakness in Section L: the weakness of containing so many groups that no continuity for any one can be achieved. In the meantime, Dr. Seeger moved to have the policy formulated for both the history-of-science and the philosophy-of-science portions of Section L. He asked Dr. Henry E. Sigerist of Johns Hopkins University to formulate the policy for the history-of-science group and your delegate to do this for the philosophy-of-science group. The policy as thus formulated by your delegate was submitted through you to your National Council and received its approval.

Meantime programs in Section L in the philosophy of science were being formulated. One took place at the Cleveland meeting of the AAAS in 1945. At this meeting Dr. Seeger had to draw upon anyone he could get who might be able to attend the meeting. Nonetheless the meeting was successful. Both he and I came to the conclusion, however, that he should have a more permanent and nationally representative program committee to draw upon in setting up the philosophy-of-science portion of the Section L programs.

With this in mind he asked your delegate to take the responsibility for the philosophy-of-science symposia at the recent St. Louis meeting, suggesting two symposia, one in the morning of March 28 on some topic in the general philosophy of science, a second in the afternoon on the specific topic of philosophy of biophysics. He also asked your delegate to assume the chairmanship of the latter symposium. He suggested also that it might be wise to have someone in the middle west assume the chairmanship of the morning symposium.

Your delegate immediately proceeded to carry out these suggestions. The more this was attempted the more it became evident, if something lasting was to result, that a program committee of national standing should be established, defining a continuous program policy within which once it was set up the local sectional groups could operate as the AAAS moves its national meeting place from one

part of the country to another from year to year. It seemed important therefore to have at the St. Louis meeting, where for the first time Section L was to operate officially upon its new basis, a key or representative group of people in the philosophy of science from every section of the United States. For this funds to defray expenses were essential. With your approval, your delegate applied to the Rockefeller Foundation through Dr. David Stevens of its Division of the Humanities. The response was immediate and generous, providing for travelling expenses and living expenses in St. Louis over a period of two days.

In consultation with Professor Charles Morris, who is on the Executive Committee of Section L of the AAAS, the following twelve representatives, apart from your delegate whose expenses were defrayed by the APA, were selected: Professors A. C. Benjamin, Max Black, Philip Frank, Carl Hempel, Henry Margenau, Ernest Nagel, Hans Reichenbach, Alfred Tarski, and Professors H. S. Burr and Raymond Zirkle as scientists selected for the symposium on the philosophy of biophysics.

The topic chosen for the morning symposium was Theory and Prediction in Science. This particular topic was chosen because it represented the special field in which the nationally chosen delegates had the greatest expertness. Instead of selecting from the group certain ones to read papers, it was decided to have the problems and issues stated objectively by one person, and Professor Rudolf Carnap of the middle west region, in which the meeting was held, was chosen for this task. Professor Morris presided over the session with great expertness. Members of the panel, representing different answers to the issues raised by Professor Carnap's introductory remarks, were chosen to speak extemporaneously. Then the other members of the panel and people from the floor participated. Scientists from other sections of the AAAS meeting up to the number of 50 were present. Your delegate also chanced to learn that Professor Norbert Wiener of the Massachusetts Institute of Technology has recently established some very important conclusions bearing upon this topic which are about to be published. Thus Professor Wiener was included in the program, his expenses to St. Louis being provided for by his own institution. Needless to say, this was a very rich symposium, the only regret being that there was not more time to follow the issues through in greater detail.

The afternoon symposium on the philosophy of biophysics was directed to the problem of the relation between the particle-physics and the field-physics approach to biology. Professors Zirkle and Burr, both trained in biology but using the methods of these two theories of physics, brought interesting papers backed by a vast amount of experimental evidence to this symposium. Professor Margenau then examined the relation between the two approaches in the light of the basic theoretical concepts of the physical theories involved. To this he added some important remarks on the significance of the Pauli exclusion principle for the understanding of biological organization in terms of the theories of physical science. Spirited remarks and reactions to the two papers were made by biologists present in the audience and by Professor Wiener. No doubt was left that this session like the morning one was a rich and vital one. Also each speaker or participant could hardly come away without being concerned with approaches to the problem different from his own, which must be taken into consideration.

There is a likelihood that the papers of the three participants in the latter symposium will be published. It was the decision of the participants in the morning session, after considerable discussion pro and con, that it is not wise at this time to attempt to publish the results of this symposium. Because of the many participants the remarks of each were necessarily brief. Thus, while they were quite intelligible to the experts in the field, they would hardly be so to the general reader without lengthy elaboration going far beyond anything submitted in the actual symposium. Furthermore, many of the participants in the symposium have already published or are in the process of publishing these longer statements of their position. Thus if one restricted oneself to the remarks of the symposium the publication would be too sketchy and condensed to justify itself, and if one made them longer there would be undue repetition of articles already published or in press. It was the feeling, however, that after these publications are out and have been digested it would be exceedingly valuable to have a meeting of the participants covering a day or two in which the issues would be thrashed out and the publication of these digested conclusions might be made.

So much for the achievements at St. Louis so far as the symposia were concerned. The other purpose of the gathering was to discuss permanent policy and plans for its succession. This was accomplished at a dinner meeting in a private dining room at the Mark Twain Hotel. This meeting, at which Dr. Seeger was continuously present, carried on until 10:30.

There was unanimous agreement that such meetings were exceedingly valuable and that a minimum of organization should be set up, permitting the planning of programs far ahead of the time of meeting and the automatic assurance that such programs will be planned. It was generally agreed that the personnel accomplishing this should officially represent the American Philosophical Association as well as the membership of Section L in the AAAS. There was a conviction also that these meetings with the AAAS should not conflict with the meetings of the APA or the allegiance of individuals to the APA. To this end it was felt that there should be a program committee in the philosophy-of-science section of Section L officially representative of the APA, just as the program committee in the history-of-science portion of Section L officially represents the History-of-Science Association. Dr. Seeger also pointed out that Section L has a chairman and a vice-chairman. The present chairman represents the history-of-science portion of the section. The vice-chairman normally becomes the chairman in the next year. He suggested that because of the new constitution and the new organization of Section L it was appropriate that the vice-chairman for this year be a representative of the philosophy-of-science group. He asked for two nominations from the philosophers of science present to pass on to the Section L committee who were meeting the next morning. Professor Nagel and your present delegate were proposed to Dr. Seeger. He reported next day that your present delegate was elected vice-chairman of Section L by the committee members. Dr. Seeger suggested also that it would be a great aid to him to have a program committee of at least four men representative of different parts of the country in addition to your delegate, who would be responsible to work out with him the program of Section L in the philosophy of science for the different annual meetings of the AAAS in different parts of the country.

This suggestion met with the approval of all those present. It was felt, as has been noted above, that this program committee should officially represent the American Philosophical Association. Two alternative ways of accomplishing this, the one direct, the other indirect, were proposed, and it was left to the decision of the Council of the APA which one would be followed. The direct method would be for the APA to have not only its delegate to the AAAS but also its own program committee nominated by the APA-AAAS philosophy-of-science group. The other way would be to have merely its delegate appointed by the APA with the program committee responsible through him to the APA. The initial inclination was in favor of the former proposal. Whichever policy the Board of Officers of the APA chooses will be satisfactory to the members of the AAAS-APA group.

Your delegate expressed the opinion that he had served in this capacity long enough and that it would be well to have new blood in this position. It was the vote of the group that if your delegate became the vice-chairman of Section L then the Board of Officers of the APA should consider nominations from the group for the appointment of a successor. The latter proposition is no longer hypothetical.

It was the tacit assumption of the group that because of the role of many of its members in the APA, and because of its nationally representative character in the field of the philosophy of science and its responsibility for the programs, there would be no difficulty in its opinion on personnel conflicting with those of the Board of Officers of the APA. There was no desire to dictate upon this point. It did seem evident however, because the driving interest is in this group, that the APA would want their advice with respect to personnel. It did seem necessary also and wise to select a program committee insofar as responsibility for this selection rested with the group at St. Louis.

So that policy for future meetings and the program for the AAAS meeting in Boston in December 1946 could be settled upon immediately by round-table discussion rather than by the lengthy process of correspondence after the group is dispersed, the following committee of four was proposed and given the authority to proceed to formulate a program subject to the qualifications and approval of the Board of Officers of the APA previously noted: Professors Carnap, Nagel, Black, and Reichenbach. It is to be noted that this committee represents the different geographical sections of the country. The vote indicated also that in staggering the periods of service of the committee Professors Carnap and Nagel should serve for the full three-year term.

This committee then met with your delegate for a lengthy breakfast session on Friday morning, March 29, to discuss the program for the Boston meeting of the AAAS. Dr. Seeger was present for a portion of this meeting. It was recommended to hold two symposia, one on the philosophy of mathematics, the other on the topic "How far does scientific method determine the social ends for which scientific discoveries are used?" Professor Nagel was given the responsibility for organizing the latter symposium, Professor Black for the former symposium. It was suggested also that the symposium on the philosophy of mathematics have selected participants representing as far as possible the intuitional, the logistic and the formalist theories of the subject. Professors Adolf Fraenkel, Herman Weyl, W. V. Quine, and Rudolf Carnap, with Alonzo Church as alternate, were

suggested. For the other symposium four participants were recommended: one a physicist, preferably Professor Oppenheimer, the second a member of a governmental agency, preferably Felix Cohen, the third a social scientist from Section K of the AAAS selected by Dr. Seeger of Section L in consultation with the Secretary of Section K, and the fourth a philosopher, preferably Professor C. I. Lewis of Harvard University.

This indicates that all the purposes lying behind the grant from the Rockefeller Foundation to the APA for the St. Louis meeting were accomplished. All those present feel that the venture was a tremendous success. They believe that something has been started which will be of inestimable lasting importance. With the program committee functioning and programs set up so far in advance of the meetings it will be possible for Dr. Seeger to bring these programs to the attention of the scientists as was not possible fully in connection with the St. Lous meeting. Thus more and more scientists should with time be acquainted with the philosophy of science and participate in these joint sessions in Section L. All of us who were present at the St. Louis meeting hope that the fruits of our deliberations will be in accordance with the Association's desires and policy.

The business meeting of the group adjourned with a unanimous and hearty vote that your delegate should convey to Dr. Stevens and the Rockefeller Foundation the appreciation and thanks of all for the generous grant which made the meeting possible.

F. S. C. NORTHROP

FINANCIAL STATEMENT

Year Ended December 31, 1945

The American Philosophical Association, Middletown, Connecticut

We have examined the accounts and records of Cornelius Krusé, Secretary-Treasurer, for the year ended December 31, 1945.

Recorded receipts were verified and compared with bank deposits and all expenditures were evidenced by cancelled checks and supporting vouchers.

Cash balances at the end of the period were confirmed to us directly by the depositories and Government Bonds on file for safe-keeping were inspected at the Middletown National Bank of Middletown, Connecticut.

Based upon the foregoing, we hereby certify that the attached statement of receipts and disbursements reflects the results of the financial operations for the year ended December 31, 1945.

KNUST, EVERETT AND CAMBRIA
Certified Public Accountants

Hartford, Connecticut
March 2, 1946

THE AMERICAN PHILOSOPHICAL ASSOCIATION

Summary of Cash Transactions for the Year Ended December 31, 1945

	General Treasury	*Revolving Fund for Publication*	*Montague Adams Fund*
Cash Balance—December 31, 1944	$1,219.40	$10,479.17	$121.89
Cash Receipts:			
Dues and Proceedings:			
Eastern Division	326.30		
Western Division	154.18		
Pacific Division	63.34		
Sale of *Proceedings*	4.00		
Sale of *Proceedings* of Sixth Congress of Philosophy	2.50		
Sale of copies of *Cahiers d'Haiti*	2.00		
Royalties (McGraw-Hill Book Co.)		64.00	
Interest on Savings Account and Government Bonds		222.07	1.22
Total Receipts	$1,771.72	$10,765.24	$123.11
Cash Disbursements:			
American Council of Learned Societies dues	$ 25.00		
Printing *Proceedings*, 1944	171.50		
Printing and binding of Vol. XVIII—PHILOSOPHICAL REVIEW	159.85		
Express and postage—Publication Committee	5.64		
Sixth Carus Lectures—printing, typing addresses, postage	85.56		
Seventh Carus Lectures—printing and postage	49.26		
Printing and stationery	20.00		
Postage	15.03		
Safe deposit box rental	3.60		
Telephone and telegraph	3.09		
Stenographic and clerical aid	1.25		
Total Disbursements	539.78	—	—
Balance—December 31, 1945	$1,231.94	$10,765.24	$123.11

Recapitulation of Funds for the Year Ended December 31, 1945

General Treasury:	
Hartford-Connecticut Trust Co., checking account	$ 1,231.94
Revolving Fund for Publication:	
Middletown National Bank, savings account #10604	2,965.24
United States Government Bonds, Series "G" (on deposit in safe deposit vault of Middletown National Bank), maturity value	7,800.00
Montague-Adams Fund:	
Central National Bank, savings account #16510	123.11
Total—All Funds	$12,120.29

Report of the Secretary of the Board of Officers

It was a source of great satisfaction to all members of the Association that the end of the war made possible the resumption of annual meetings. These first meetings after the war made all participants realize what a deprivation their omission during the war years had been. The meeting of the Pacific Division was a joint meeting of the Eastern and Western Divisions with the Pacific Division for the reception of the seventh Carus Lectures presented by Clarence Irving Lewis on the subject, *Analysis of Knowledge*. Unfortunately, the great congestion of travel connected with the repatriation of men in the services restricted sharply the attendance of members of the Eastern and Western Divisions.

Elsewhere in the *Proceedings* there appears a full account by F. S. C. Northrop, delegate of the American Philosophical Association to the American Association for the Advancement of Science, of the important joint meeting of the two associations held in St. Louis on March 27–30, 1946, for the purpose of discussing in symposia the following topics in the field of the philosophy of science: Theory and Prediction in Science and the Relation between the Particle-Physics and the Field-Physics Approach to Biology. Through its delegate the American Philosophical Association sought and obtained a generous grant making possible the attendance and participation in these symposia of an unusually distinguished group of philosophers and scientists. The Association once more is greatly in debt to the Rockefeller Foundation for its continued interest in aiding the Association to carry out its expanding program of activities. One of the outcomes of the joint meeting was the planning and organizing of greatly increased cooperation between scientists and philosophers.

The Association through its Divisions and its various national committees has expressed great interest in reestablishing and extending its contacts with philosophers and their associations in all parts of the world. The Organizing Committee of the Inter-American Congress of Philosophy hopes soon to resume its planning for the convening of the Inter-American Congress which had to be postponed on account of Pearl Harbor. Meanwhile, thoughts are turning to the organization of the Tenth International Congress of Philosophy which was to have been held in Holland (Groeningen) in 1941. Another evidence of the resumption of international cooperation in the field of philosophy is the revival in Paris of the

International Bibliography of Philosophy which was sponsored before the war by the International Congress of Philosophy and the International Institute for Intellectual Cooperation.

The Chairman of the Board of Officers, G. P. Conger, appointed H. W. Schneider to the chairmanship of the standing committee on Bibliography, and Emerson Buchanan, American representative of the International Bibliography, as its secretary.

Glenn R. Morrow was reappointed chairman of the Committee on Publication for another term. He was also reappointed a delegate to the American Council of Learned Societies.

The Board of Officers voted to appoint and defray the travelling expenses of G. P. Conger as official delgate of the Association to the general meeting for the reception of the Carus Lectures held at Berkeley, California, in connection with the joint meeting of the Pacific Division with the Eastern and Western Divisions. It also voted to authorize the treasurer to reimburse F. S. C. Northrop his expenses incurred in participating as the Association's representative in the joint meeting of the Association and the American Association for the Advancement of Science.

R. P. Hawes was reappointed as delegate of the American Philosophical Association to the American Documentation Institute.

The Board of Officers voted to authorize E. A. Burtt to represent the Association during his year of travel in India and China.

The secretary has been requested to assist in the compilation of *Who's Who in Latin America* by serving as a member of the advisory committee of the editors.

For the Board of Officers,
CORNELIUS KRUSÉ, *Secretary*

WESTERN DIVISION

President: Marten ten Hoor
Vice-President: L. P. Chambers
Secretary-Treasurer: George R. Geiger
Executive Committee: The foregoing officers and Willis Moore (1949), George Gentry (1947) and Howard D. Roelofs (1948).

The forty-fourth annual meeting of the Western Division of the American Philosophical Association was held at the University of Chicago, May 9–11, 1946. The following program was presented:

Thursday afternoon, May 9th:
Session on Epistemology (Chairman, A. G. Ramsperger): "Verification and Probability", by Edwin R. Walker (discussion led by Herbert Feigl).
"Causation and Truth" by Ray Lepley (discussion led by Paul Henle).
"Probability as a Guide in Life" (discussion led by George Gentry).
Session on Philosophy of Religion (Chairman, E. L. Schaub):
"The Use of the Words 'God' and 'Religion' in Philosophy", by L. P. Chambers (discussion led by H. N. Wieman).
"The Common Good and the Value Receptacle", by Charles Hartshorne (discussion led by D. Luther Evans).
"An Approach to the Concept of Spirit", by Walter Cerf (discussion led by Wayne A. R. Leys).

Thursday evening: Smoker, with address of welcome by President Colwell of the University of Chicago, and address by T. V. Smith on "Philosophy and Military Government".

Friday morning, May 10:
Panel Discussion on "Philosophy in American Education", with Max Black, William Frankena, Harry Jellema, A. E. Murphy, and Max C. Otto; Everett Hall, chairman.

Friday afternoon:
Session on Values (chairman, Albert E. Avey):
"On the Justification of Ideals", by Willis Moore (discussion led by Archie J. Bahm).
"Whitehead's Theory of Intuition", by A. H. Johnson (discussion led by Victor Lowe).
"Definitions in Value Theory", by Philip Blair Rice (discussion led by Wilfrid S. Sellars).
Session on Metaphysics (chairman, A. C. Benjamin):
"A Generic Theory of Time", by Erwin Biser (discussion, Bertram Morris).
"Essence and Existence", by William O'Meara (discussion, Herbert Spiegelberg).
"Second Thoughts on Dualism and Interaction", by Howard D. Roelofs (discussion by Henry V. Cobb).
Public Lecture: "The Philosopher of History and the Modern Statesman", by Kurt Riezler.

Friday evening: Annual dinner with presidential address by G. P. Conger on "Method and Content in Philosophy".

Saturday morning, May 11:
Symposium on "Philosophy and World Order", with J. W. Hudson, Frank H. Knight, and Harold Taylor; chairman, R. W. Sellars.

At the business meeting late Saturday morning, the following nominees were elected to full membership: A. Carl M. Ahlen, John M. Anderson, Merle W. Boyer, Joseph W. Buckley, James Collins, Earle Connette, Estelle Allen De Lacy, Arturo B. Fallico, Robert S. Hartman, Robert F. Harvanek, Carl F. H. Henry, Clyde A. Holbrook, Charles D. Tenney, and Lewis Zerby.

The Commitee on Philosophy In Higher Education submitted a report of the past year's activities, a full report of which will be published in the *Philosophers' Newsletter*. The committee made the following recommendations which were adopted by the division:

That the Western Division co-operate with the Pacific and the Eastern Divisions in establishing, on a national basis, a listing or placement service for teachers of philosophy, that this cooperation include financial support on a *pro rata* basis, and that the President appoint a member of the Western Division to work with members from each of the other Divisions on this project, and that this member be also appointed to membership on the Committee of Philosophy in Higher Education (unless already a member of that committee). That the Information Service on Available Teachers of Philosophy as now operating under the auspices of the Committee on Philosophy in Higher Education be continued until such time as the national service be set in actual operation. That the *Philosophers' Newsletter*

be continued in publication on the same basis as during the last year. That the Committee on Philosophy in Higher Education be granted an operating budget of $150.00 for the ensuing year to carry on these and other related projects falling within its province.

The membership voted favorably on the two following constitutional changes, one to increase dues payable to the national association from 25 to 50¢ per member and to make certain verbal changes in Article III, Section 2, the article to read now as follows: "The Secretary shall collect annually from the Treasurer of each division, at the rate of 50 cents per member, money to defray the necessary expenses of the Board of Officers. The Secretary shall also apportion, collect, and disburse the *pro rata* share of the expenses of special joint projects voted by the three divisions." The division voted not to raise its own dues at the moment, but to experiment with the present plan for three years to see what happens to the financial status of the division.

At the suggestion of Joseph W. Cohen, the following two resolutions were adopted by the division: "Whereas we recognize that the problems created by the atomic bomb present in dramatic form the major ethical problems confronting the world not only by virtue of the rapid advances of war technology but also by virtue of the unresolved institutional tensions of our society; Be it moved (1) that the Western Division of the American Philosophical Association acknowledge the valuable services of the atomic scientists both to the nation and to all students of our society in their clarification of the significance of the atomic bomb and in their apparently successful efforts to assure its effective civilian control through Congressional legislation; (2) that the Western Division of the American Philosophical Association is ready to co-operate with the Federation of American Scientists in its present efforts to secure effective international control of atomic energy through the United Nations so as to safeguard the world from possible catastrophe; (3) that the executive committee of the Western Division of the American Philosophical Association be empowered to convey the above action to the Federation of American Scientists; (4) that the executive committee also be empowered, as occasions arise which call for such action, to circulate to the members of the association such proposals or resolutions as seem desirable and to determine by ballot or other appropriate means what action shall be formally taken by the association concerning the proper control of atomic energy and the proper safeguards for freedom of scientific research."

"Be it Resolved, that the Western Division of the American Philosophical Association recognizes the desirabiilty of encouraging throughout the Association a more effective mobilization of our philosophical energies and resources to the end of clarifying major issues of social and educational importance to our members and to the community; that a plan be worked out so that such group or groups as may be established for this purpose meet in conjunction with the regular meetings of the various divisions of the American Philosophical Association; that the executive committee [Professor Cohen's original resolution asked for a special committee for this purpose, but on Professor Murphy's amendment the foregoing was substituted] of the Western Division of the American Philosophical Association explore ways and means for realizing the above ends, and initiate whatever steps seem feasible for their attainment."

An invitation to hold the 1947 meeting of the division at the State University of Iowa in Iowa City was received and accepted, with the provision that the executive committee be allowed discretion to set the exact time of the meeting next spring, and to keep other possibilities open in case some unexpected contingency develops.

A resolution expressing the thanks of the meeting to the University of Chicago, and particularly to the Chicago philosophy department, for their kind hospitality this year was unanimously passed by the membership.

The following officers were elected for 1946–1947:

President: Marten ten Hoor

Vice-President: L. P. Chambers.

Secretary-Treasurer: George R. Geiger.

A new member of the Executive Committee for three years, Willis Moore, replaces Charner Perry.

FINANCIAL STATEMENT

Receipts:		
Balance on hand, April 20, 1945	$556.10	
Dues collected (to April 18, 1946)	479.06	
Refund from Hall committee	29.34	
Total		$1,064.50
Expenditures:		
Amer. Phil. Assoc., dues and proceedings	$154.18	
Hall committee (includes $29.34 above)	161.64	
Printing	62.50	
Postage	24.90	
Clerical	15.00	
Program committee traveling expenses	12.50	
Dues refund (overpayment by Bisbee)	6.00	
Bank charges	6.65	
Total		$ 443.37
Balance on hand, 4/18/46		$ 621.13
	(audited and signed by William F. Tout, accountant, Yellow Springs, Ohio)	
Addenda:		
Dues received April 18 to May 11, 1946	$ 28.00	
Expenditures:		
Information Service	80.41	
Smoker	15.00	
Charner Perry, mailing expenses for meeting	25.00	
Shoreland Hotel, for cancelled reservations	7.00	
Bank charge	1.10	
	$128.51	
Final balance as of May 11, 1946		$ 520.62

THE FOLLOWING MEMORIAL NOTICES WERE PRESENTED:

It is appropriate to commemorate Louis Trenchard More and Roy Kenneth Hack in a single memorial. The fact that both died in the same year would provide of itself only a slight basis for remembering them together. But both taught at the University of Cincinnati and both were primarily connected with its Graduate School, Mr. More as dean and Mr. Hack as a Senior Fellow. More significantly, both, the one a physicist and the other a classicist, were members of the American Philosophical Association, and throughout their many years of active work as teachers and scholars, both constantly brought to bear upon their work a constant interest in philosophy, and a depth of knowledge and understanding rare in these days of specialization. Finally, they were close, intimate friends.

Louis Trenchard More was born in 1870. He was in his seventy-fourth year when he died on the 16th of January, 1944. He came to the University of Cincinnati in 1900 and served the University as Professor of Physics and later as Dean of the Graduate School until his retirement in 1940. His most notable publication is undoubtedly *The Life of Isaac Newton;* and he had also completed the proofreading of *The Life of Robert Boyle*, since published as a companion study of *The Life of Newton*. Anyone who reads either of these books cannot fail to learn the inseparability of science and metaphysics; and he can learn also the inherent risk in universalizing methodological scientific procedures into metaphysical principles of explanation.

Roy Kenneth Hack was born in 1884. He was in his sixtieth year when he died on August 25, 1944. He received the degree of *Baccalaureus Litterarum* from Oxford University, where he was a member of Oriel College. After some years of teaching at Williams College and at Harvard University, he came to Cincinnati in 1923 and continued here until his death. Professor Hack's most notable contribution to classical scholarship and to philosophy is contained in the volume *God in Greek Philosophy*. Here the traditional interpretation of the development of Pre-Socratic philosophy is subjected to critical examination, and a new interpretation is suggested on the basis of a careful study of the fragments remaining to us from the writings of those early thinkers.

In these days of specialization a proper remembrance of Dean More and of Professor Hack is for us to reflect more seriously than is our wont on our own tendencies to narrowness, and to see in these two men examples of the breadth and perspective we should strive to attain. Each of them was technically proficient in a specialty; both had a lively sense of the supreme importance of how man interprets the universe in which we all live. Their training gave them knowledge. They sought wisdom in philosophy.

HOWARD D. ROELOFS

Dr. Herman Hausheer was born in Switzerland, August 13, 1891, and died in Lamoni, Iowa, August 3, 1944. His early European education was at the Universities of Zurick and Paris, following which Dr. Hausheer came to this country and took three degrees at Harvard. In 1922 he received his Ph.D. in philosophy from the University of Iowa, where he studied under Professor Starbuck. His teaching experience included positions in the University of South Dakota, the College of Puget Sound, Alma College, the Northern State Teachers College of South Dakota, and Taylor University, where he was head of the department of philosophy and psychology.

Professor Hausheer was a voluminous contributor to the philosophical journals and to scholarly enterprises such as *Philosophical Abstracts*, the *Encyclopaedia of Religion*, and the *Dictionary of Philosophy*. He also assisted Professor Schilpp with the *Library of Living Philosophers*. His particular specialty was the philosophy of St. Augustine, and it is quite safe to say that he was the leading Protestant scholar of Augustine in America of today.

Those who remember Dr. Hausheer will recall his goodnatured air of companionship, his sincere but never stuffy sense of strict scholarship. He brought an Old-World feeling of seriousness and fellowship that will be missed at our future meetings.

GEORGE R. GEIGER

GEORGE R. GEIGER, *Secretary-Treasurer*

PROCEEDINGS

PACIFIC DIVISION

President: Everett J. Nelson
Vice-President: Hans Reichenbach
Secretary-Treasurer: E. W. Strong
Executive Committee: The foregoing officers and W. R. Dennes *ex officio* for one year, C. J. Sullivan (1946), Alexander P. Maslow (1947), and Robert E. Fitch (1947).

The joint meeting of the Eastern and Western Divisions with the Pacific Division (nineteenth annual meeting) for the reception of the seventh in the series of Carus Lectures was held at the University of California, Berkeley, on December 27, 28, and 29, 1945. Clifford L. Barrett represented the Eastern Division and G. P. Conger represented the Western Division and was official delegate of the National Board of Officers.

The evening meeting on December 27 was devoted to an informal discussion with the Carus Lecturer, Professor Clarence Irving Lewis, of his mimeographed theses, Part III on Valuation in *Analysis of Knowledge* under the title "Valuation as a Type of Empirical Knowledge".

The Carus Lectures on the subject, *Analysis of Knowledge*, were presented in afternoon meetings on December 28 and 29, G. P. Conger, chairman of the National Board of Officers of the Association, presiding:

I. Inherent Values and the Esthetic
II. The Moral Sense and the Active Life

On the remainder of the program, the following papers were presented:

How Can Ethical Principles be Known?.....S. S. S. Browne
The Search for the Good.....E. O. Sisson
Toward a Definition of Cultural Crisis.....Melvin Rader
A Critical Analysis of Karl Marx's Theory of Value.....A. C. Wiederhold
Philosophical Aspects of Probability Theory.....C. W. Churchman
Probability and Meaning.....David Rynin
Some Relations Between Philosophy and the Study of Language..C. L. Stevenson
Notes on the Categories.....Frederick Anderson
The Presidential address: Conflict.....W. R. Dennes
Wilamowitz-Möllendorff on Nietzsche.....J. H. Groth
Phenomenology on Time, Birth, Death.....Philip Merlan
The Historian and the Philosophy of Science.....
.....T. A. Cowan (read by C. W. Churchman)
Contradiction of Singular Propositions.....E. J. Nelson

The Pacific Coast Conference on the Teaching of Philosophy held a morning meeting on December 27, members of the American Philosophical Association attending. A paper by Harry Ruja entitled "Objective Tests in Philosophy" was read and discussed.

As recommended by the Executive Committee, the following nominees were elected to membership: Arthur Child, Paul R. Helsel, Charles McKeon, Hunter Mead, and Alfred Schuhmann.

The following were elected to associate membership: David Goldshur, Kenneth Simpson.

The Division voted to accept the invitation conveyed by H. G. Townsend to hold its twentieth annual meeting at the University of Oregon.

The Executive Committee recommended and the Division voted to co-operate with the Western Division in the operation of an information and placement service available to all teachers of philosophy and related subjects. In voting full collaboration, the Pacific Division delegated to its Board of Officers authority to participate in the financing of the undertaking, and to determine, from time to time, personnel of the service and location of a central office.

The following resolution and proposal were put in the form of a motion and passed, with instructions to communicate the action taken to the Federation of Atomic Scientists, Washington, D. C.:

Resolution: The Pacific Division of the American Philosophical Association expresses its great appreciation of the work of the Federation of Atomic Scientists who have performed a great educational service to the nation in making known the facts about atomic energy and the consequences of atomic weapons for mankind; who have stressed the need for immediate international control of such weapons and the dangers residing in unwise governmental policies which would interfere with the progress of free scientific inquiry.

On the afternoon of December 28, following the first Carus Lecture, an informal meeting was announced and held for the reception and discussion of a report by Joseph W. Cohen on the Rocky Mountain Conference on Atomic Energy held at the University of Denver on December 7, 8 and 9, 1945.

The annual business meeting was held on December 29 at 8:30 A.M.

The following memorial resolutions were read and accepted by a standing vote of the members:

Members of the American Philosophical Association will remember the impressive figure and incisive, penetrating remarks of William Savery, who died at the age of seventy on December 8, 1945, at his home in Seattle, Washington.

Professor Savery was born on September 26, 1875, in Attleboro, Massachusetts. After his undergraduate training at Brown University, from which he received his A.B. degree in 1896, he did his graduate work at Harvard during the great days when Royce and James were at the height of their power. Because of his brilliant record as a student, he was awarded the James Walker Fellowship in 1898 for a year's study in Europe, where he attended the University of Berlin. Upon returning to Harvard he was granted his Ph.D. degree in 1899. After teaching two years at Fairmount College (now University of Wichita), he was appointed in 1902 Professor of Philosophy and Head of the Department of Philosophy at the University of Washington, a position which he retained until his death. He was Mills professor at the University of California in 1933, and was a visiting professor at Columbia University in 1935–36. He also taught during summers at Harvard University, the University of Pennsylvania, the University of California, the University of California at Los Angeles, and Stanford University. During 1931, he was President of the Pacific Division, and Chairman of the Board of Officers of the American Philosophical Association.

Although like Socrates he preferred the living presence and the spoken word to written discourse, he published a series of remarkable philosophical papers, as profound as they were erudite. His philosophy was naturalistic, but quick with the life of the spirit, with esthetic and ethical sensitivity. His philosophical interests were as broad as philosophy itself, and not only did his competence extend to every branch from the philosophy of values to modern technicalities in the philosophy of science, but he could discuss the problems of the arts and sciences themselves with informed insight.

As a courageous liberal, he was passionately devoted to a free and democratic culture, because he had the faith that excellence could be widely shared. Throughout his career this faith found expression not only in the classroom but in the political affairs of the State of Washington. For many years he was a member of a small group, including Vernon Parrington and J. Allen Smith, who formed on the University of Washington campus the intellectual advance guard of the liberal and progressive movement in the State.

With the death of Professor Savery a great philosopher-teacher has left us. He was a great teacher because he was able to make philosophy an integral and actively determining factor in the future lives of his students. His influence both as philosopher and teacher is evidenced by the large number of philosophers who have been stimulated by his ideas and personality, and by the number of teachers of philosophy in departments over the country who were first introduced to philosophy by him. He made his students realize the truth of Plato's parable of the cave, that the purpose of education is to turn the whole soul around, in order that the eye of the soul may be directed toward the light of truth.

EVERETT J. NELSON

On November 1, 1945, Henry Lanz died, at the age of fifty-nine, in the Palo Alto Hospital. The tragedy of his death was intensified, for his many friends, by the sudden and unexpected way in which the illness developed, since the very day before it started he appeared perfectly well.

Henry Lanz was a man with wide and varied interests. In philosophy he wrote on problems in many fields, including logic and esthetics, ethics and theology. He was perhaps best known to the academic world for, among other distinguished works, his volume entitled *In Quest of Morals*, published in 1941, which was the amplification of an essay that won first prize in an international competition conducted by three Scandinavian countries. Outside philosophy, his interests ranged from music and mathematics to community problems and international affairs.

Although not, in any conventional or merely external sense, a religious man, Professor Lanz was something of a mystic. Frequently, when one met him in the Stanford Quad, the warm and friendly smile that would light up his face seemed to break through an other-worldly look which signified more than professorial absentmindedness or (what his colleagues in philosophy liked, jokingly, to chide him about) his "disorientation to the space-time world": a look which seemed to mean that to him the affairs of this life, even the academic ones, were not worthy of too much concern, and that his mind, though vigorous and challenging in dialectic, was most happy and at ease when, in Santayana's phrase, it returned to the "home circle of essence".

But Professor Lanz, although possessing a highly versatile and original mind, may well be remembered with most pleasure, and now sad regret, for his spontaneous friendliness and transparent honesty, the sense he gave you of speaking from the heart, and if a little wildly at times (he used to say he was "just a wild Russian"), this showed in him the kind of passion and imagination which enlivened every—perhaps otherwise dull—meeting he attended. For this, along with other things, he will be missed—being a real person, unique and unforgettable.

JOHN R. REID
JOHN L. MOTHERSHEAD

The treasurer's report was read and approved:

Receipts

Balance on hand February 24, 1945	$ 807.53
Membership dues	196.00
Interest	2.25
Total	$1,005.78

Expenditures	
A.P.A. Treasury	$ 63.34
Printing of dues notices (3 years' supply)	4.87
Printing announcements of 19th annual meeting	5.38
Postage: 150—3 cent stamped envelops	5.03
Refund to P. R. Helsel	4.00
Rental of rooms for 19th annual meeting	37.50
Printing of banquet tickets	1.79
Envelopes and postage; cigars and cigarettes	26.63
Printing, addressing, and mailing of announcements of A.P.A. general meeting	45.28
Printing of programs for the general meeting	18.76
Total	$ 212.58
Balance on hand December 28, 1945	$ 793.20

Audited by Paul Marhenke

Proposal: The communiqué summarizing the results achieved by the conference of the Big Three in Moscow on international action to prevent the use of atomic bombs as instruments of war is encouraging. The dangers, however of unwise policy or ill-considered legislation with regard to freedom of scientific inquiry and the promotion of international concord are not past. It seems altogether proper that the Pacific Division of the American Philosophical Association should be in a position to co-operate with, and support, the efforts of the atomic physicists or any other groups on matters of common concern. These are concerns with the imperative need for international agreement, unhampered scientific investigation, and the safeguarding of cultural values. In order to provide an agency for submitting to members of the Pacific Division such recommendations or resolutions as may be of urgent and proper concern, it is proposed that the Executive Committee be empowered to submit them to the members of the Division, either for their individual information and action, or for official decision by the majority of those voting. It is the intention of this proposal that any member of the American Philosophical Association is in order in submitting to the Executive Committee of the Pacific Division, through the Secretary, any suggestion or recommendation which he would like to have brought to the attention of the membership.

The Executive Committee nominated the following for the offices indicated and their election was unanimous: President, Everett J. Nelson; Vice-President, Hans Reichenbach; Executive Committee for two year terms, Alexander P. Maslow and Robert E. Fitch.

E. W. STRONG, *Secretary-Treasurer*

EASTERN DIVISION

President: Katharine E. Gilbert
Vice-President: John Herman Randall, Jr.
Secretary-Treasurer: Roger W. Holmes
Executive Committee: The foregoing officers and William K. Wright *ex officio* for one year, George Boas (1948), Otto F. Kraushaar (1948), George F. Thomas (1947), John Wild (1946), Donald C. Williams (1947).

The forty-second meeting of the Eastern Division was held at Sarah Lawrence College in Bronxville, New York, on February 21, 22, 23, 1946. The following program was presented:

Concurrent Sessions:

Finality and Art ..... Louis Barillet
The Paradox of Aesthetic Meaning ..... Lucius Garvin
On Morphic Semantics ..... Max Rieser
Empiricism and Vagueness ..... Arthur Burks
Comments on the Ideal of an Empty Logic ..... Richard Hocking
Self-Evidence ..... Otis Lee

Symposium:

Metaphysics: Its Function, Consequences, and Criteria: William Ernest Hocking, Sterling Lamprecht, John Herman Randall, Jr.

Concurrent Sessions:

Levels of Meaning and the History of Ideas ..... Abraham Edel
The Philosophic Significance of the History of Thought .. Paul Oskar Kristeller
The Current Significance of the History of Thought ..... Philip P. Wiener
The Logic of Naturalistic Arguments Against Theistic Hypotheses .....
..... Peter A. Bertocci
Ethics of Motives and Ethics of Consequences ..... David Baumgardt
Rational Preference, Determinism, and Moral Obligation ... Charles A. Baylis
National Traditions in Philosophy ..... A. A. Roback

Symposium:

The Distinctive Contribution of Philosophy to the Issues of the Peace: Glenn R. Morrow, Ralph Barton Perry, Herbert W. Schneider.

The Business Meeting was held at 11:30 A.M. on February 23, with President Wright presiding. The Minutes of the Forty-First Annual Meeting were approved as printed.

The following Treasurer's report was read and approved:

Receipts		
Balance brought forward	$2,827.13	
Dues for 1945	799.00	
Dues for 1946	8.00	
Accrued dues collected	56.00	
Interest	56.25	
		$3,746.38
Expenditures		
Dues to National Association	$ 127.50	
Cost of 1944 Proceedings	198.80	
Program Committee	120.57	
Printing	121.71	
Stationery	63.70	
Postage	12.48	
Secretarial Aid	61.26	
Bank Charge	2.39	
Dues refunded	13.00	
Telephone and Telegraph charges	5.87	
Expenses Joint Meeting at San Francisco, Dec. 1945	42.25	$ 769.53
Balance on hand		$2,976.85

Audited by Cornelius Krusé and Sterling Lamprecht

The Auditing Committee reported that the Treasurer's report had been examined and was found correct.

On the motion of C. J. Ducasse the following amendments to the Constitution, printed in the 1942 Proceedings together with the report of the committee on conditions for admission to membership in the Division, were approved:

That section two of Article II be replaced by the following:

"2) There shall be two classes of members, full members and associate members.

Full membership. Eligibility to full membership shall be limited to the following classes of persons:

(a) Persons whose training in philosophy has been advanced and sysmatic enough to make them competent to teach the subject at the college or university level. *Prima facie* evidence of such competence will ordinarily be considered afforded by possession of a Ph.D. degree in philosophy from a reputable American university or from some foreign university having like standards; or by successful teaching of philosophy over a number of years with the rank of instructor or higher in a college of good academic standing.

(b) Persons who have published contributions, whether in philosophy itself or in borderline fields, which in the opinion of the Executive Committee are of substantial value to Philosophy.

Associate membership. Persons who are ineligible to full membership, but whose interest or achievements in philosophy are regarded by the Executive Committee as warranting their affiliation with the Association, shall be eligible to associate membership. Associate members shall be entitled to all of the privileges of full membership except voice and vote in its business meetings."

That section three of Article II be modified to read:

"3) The annual dues of full and associate members shall be two dollars, failure in payment of which for three consecutive years shall *ipso facto* cause membership to cease."

The Nominating Committee (Edgar S. Brightman, Chairman, Sterling Lamprecht, and Glenn R. Morrow) presented the following nominees: for President, Katharine E. Gilbert; for Vice-President, John Herman Randall, Jr.; for members of the Executive Committee for terms of three years, George Boas, and Otto F. Kraushaar. All were unanimously elected.

The following recommendations from the Executive Committee to the Division were adopted:

That the next meeting of the Eastern Division be held at Cornell University during the Christmas Vacation, 1946.

That President Wright appoint a committee of three members to consider problems of publications in general and in particular that of Dr. Liebert for the establishment of an international journal, this not to involve financial commitment.

That the Eastern Division cooperate fully in the Listing Service initiated by the Western Division, that this cooperation include financial support on a *pro rata* basis, and that the incoming President appoint a member of the Eastern Division to work with members from each of the other Divisions on this project.

That the Eastern Division assume a *pro rata* share of $300 needed for the preparation of a single volume covering books and articles of the years 1939–45 for the International Bibliography of Philosophy sponsored by the International

Congresses of Philosophy and the International Institute for Intellectual Cooperation.

That the Eastern Division recommend to the National Association that dues to the National Association be raised from 25¢ to 50¢.

That the following applicants be elected to full membership: Denison M. Allan, Sidney P. Albert, Anita Ascher, Joseph L. Blau, Euryalo Cannabrava, Felix Cleve, John W. Dowling, Walter Fales, Charles Frankle, Anita D. Fritz, Nelson Goodman, J. Glenn Gray, Ellen Stone Haring, Frances B. Harmon, William H. Hay, Roy Edward Hoke, Paul L. Holmer, John A. Hutchinson, Alain Leroy Locke, Helen Merrell Lync, Robert Mack, Hans Margolius, Jerome Nathanson, Monelisa Perez-Marchant, Grace L. Rose, Ralph G. Ross, Thomas S. K. Scott-Craig, Laurens H. Seelye, Evelyn Urban Shirk, Morris Weitz, Rulon Wells, Robert E. Whallon.

That the following applicants be elected to associate membership: Arthur L. Benson, Alan Ashton Cooley, Charles A. Fritz, Jr., Thomas E. Hill, Eli Karlin, Myron McLaren, Taulor Edward Miller, Ira Rosenbaum, John E. Smith, Yehuda L. Weinberg, Mary Whitman.

That the following be changed from associate to full membership: Kenneth D. Benne, Hanna Hafkesbrink, Adrienne Koch.

The following motions from the floor were accepted:

That the Secretary be instructed to send a message of felicitations from the Eastern Division to Benedetto Croce on his eightieth birthday, February 25, 1946.

That the Eastern Division express to President and Mrs. Taylor, to the faculty and to the students of Sarah Lawrence College its deep appreciation of their generous hospitality and many gracious courtesies extended to the members of the Association during their first meeting since the interruption of meetings caused by the war.

That the Eastern Division express to the Student Committee on arrangements its collective and individual appreciation of the hospitality and personal consideration extended to its members by the students of Sarah Lawrence College.

That it be the sense of the meeting that this Division together with the other Divisions of the Association should take whatever steps are possible to establish friendly and cooperative relations with the philosophers of all other countries and in particular at this time with the philosophers of Soviet Russia.

On behalf of the Committee on Exiled Scholars (Horace L. Friess, Chairman, Edgar S. Brightman, Ernest Nagel, Edna A. Shearer, Paul Weiss), that the Eastern Division's Committee on Exiled Scholars be now discharged; and with the instruction to turn over the balance of $307.97 in its account to the American Committee for Refugee Scholars, Writers, and Artists, Inc.

That a committee be appointed to consider the possibility of initiating a movement, together with the American Council of Learned Societies and the American Association for the Advancement of Science, for establishing a weekly newspaper or magazine to present impartial and responsible news and opinions of leaders of our country.

That the Division undertake the collection and study of suggestions from members of the Association and other interested persons of specific opportunities for international cooperation in which citizens could engage (including work as

educators), directly in responsible relation to the United Nations organization, and that a committee be appointed for this purpose.

The following memorial notices were read, and by a rising vote were adopted and ordered printed in the *Proceedings:*

Henry Harbaugh Apple, the sixth President of Franklin and Marshall College, Lancaster, Pa., was born at Mercersburg, Pa., on November 8, 1869. He was the son of Thomas Gilmore Apple, who had been President of Franklin and Marshall College from 1878 to 1890. From the same institution Henry Harbaugh Apple received the Bachelor of Arts degree in 1889, and the Master of Arts degree in 1892. He graduated from the Theological Seminary of the Reformed Church in the United States, located at Lancaster, Pa., in 1892, and was shortly thereafter ordained to the Christian Ministry.

He served as pastor of St. John's Reformed Church in Philadelphia, Pa., from 1892 to 1898. His ministry was continued in the pastorate of Trinity Reformed Church of York, Pa., from 1898 to 1909. He was a member of the Board of Home Missions of the Reformed Church, and served as President of the Synod of the Potomac in 1905.

At the Inauguration of Dr. Apple, as President of his Alma Mater in 1909, the address representing the delegates from educational institutions, was delivered by Woodrow Wilson, then President of Princeton University. Dr. Apple's service of twenty-six years as President of the College marked a definite period of development in the history of the institution. The number of students was trebled, the endowment greatly increased, nine building were added, and new departments of instruction were provided.

During this period Dr. Apple was identified not only with educational and ecclesiastical enterprises, but also with civic and community welfare. During World War I he served as Chairman of the United War Work Campaigns, Chairman of the Federal Labor Board and on the Executive Committee of the American Red Cross. He was President of the Lancaster Chamber of Commerce in 1928–1929 and President of the Association of Pennsylvania College Presidents in 1920–1921. He received the honorary degree of Doctor of Divinity from Lafayette College in 1909 and the degree of Doctor of Laws from four institutions. He was also awarded the Cross of Merit from the Hungarian Government in 1933. He resigned the Presidency of the College in 1935, and died in Lancaster, Pa., on May 19, 1943, aged 73 years.

For 100 years the Apple family had been associated with Marshall College, Franklin and Marshall College, and the Theological Seminary of the Reformed Church in the U.S. as students, teachers, and Presidential Administrators.

H. M. J. KLEIN

Wendell T. Bush was born at Ridgeway, Michigan, on September 25, 1866. He attended Polytechnic Institute, Brooklyn, and did graduate work at Harvard University, where he took his M.A. degree in 1898. In 1900–1901 he studied at the University of Berlin, and took his doctor's degree in 1904 at Columbia with a dissertation on Avenarius.

He taught continuously at Columbia University from 1905 and in 1928 became full professor of philosophy.

His interests in philosophy were those of the imaginative scholar who regarded philosophical thought as an expression of wider human culture, and close to art and religion. His own courses illustrated his approach to philosophical studies. For many years he offered regularly at Columbia a course in aesthetics, and a course in Plato whom he treated primarily as a dramatist and artist whose materials were ideas. In the latter years of his life he grew more and more interested in religion as a cultural and philosophical study, and was the founder of that now elaborate program of studies in religion and culture which has become an important part of the Columbia graduate school. Professor Bush travelled widely and assiduously in the interest of collecting materials for such studies, and out of these travels and collections grew the Bush Museum of Religion and Culture which he

contributed to the University before his death, and which is growing into one of the most useful instruments for religious studies in the country. Its gathering of books, art objects, ritualistic materials, is an important aid to students in this growing field.

Professor Bush was one of the founders, for many years one of the editors, and throughout his life one of the most generous supporters, of the *Journal of Philosophy*. He was the benefactor, too, of many students and teachers in the field, and quietly and often anonymously helped young scholars to have time for study and travel abroad.

To his colleagues, and to a whole generation of graduate students at Columbia, he was a wise counsellor, and in the best sense a humanist and man of the world with an unworldly devotion to the pursuit of wisdom and the encouragement of it in his younger friends. He regarded religion as a phase of culture and philosophy, an intellectual art. His own too few writings illustrated the qualities he himself admired in philosophers.

ERWIN EDMAN

Harold Russell Chidsey was born into a socially prominent family in Easton, Pennsylvania, on June 1, 1887. He attended the Easton High School and Lafayette College, receiving the A.B. degree from the latter institution in 1909. Planning at that time to enter the ministry of the Presbyterian Church, he entered Union Theological Seminary in New York City, graduating in 1912. He did not find the satisfaction in church service that he had anticipated and so entered the Graduate School of Harvard University with the purpose of studying philosophy. This work was interrupted by the first World War, in which he served as a Major in the Fourteenth Infantry of the Nineteenth Division. Returning to Harvard, he received the Doctor of Philosophy degree in 1920. He taught philosophy successfully at Union and Dartmouth Colleges and at Brown University. In 1930 he was appointed by the late President William Mather Lewis as Professor of Philosophy and head of the department at Lafayette, a position which he occupied with distinction until his untimely death by accident in January of this year.

Dr. Chidsey's teaching was marked by a clear insight into the problems associated with philosophical investigation. His chief interests lay in the history of philosophy and in metaphysics. He had the rare ability to represent his subject-matter to his students in such a way as to attract them to it, without, at the same time, distracting their minds from the necessity of following a method of true scientific analysis. While always fully aware of the importance of maintaining a strictly logical interpretation of philosophical problems and possessing, as he did, certain fundamental convictions in right thinking, he never adhered dogmatically to any one system of philosophy. In his later years, his sympathies were most closely allied with a philosophy of realism. He taught, however, as a student of the subject and not as a propagandist for a particular system. His chief distinguishing characteristic was that of a seeker after truth, and this fact marked both his personal and his professional interests.

DALE H. MOORE

George Sidney Brett, Head of the Department of Philosophy and Dean of the School of Graduate Studies in the University of Toronto, died on October 27, 1944. He was born in Briton Ferry, South Wales, on August 5, 1879, and spent the latter half of his life in Canada, where he came to identify himself with the institutions and culture of this continent. He wrought with success in many fields of learning, in Greek lexicography, history of science, political theory, psychology, and technical philosophy. He was a great scholar, and wrote with clarity, compactness, and telling phrase. His published works include *The Philosophy of Gassendi* (1908), *A History of Psychology*, 3 volumes (1912–21), *The Government of Man* (1913), *Psychology, Ancient and Modern* (1928), and more than a hundred articles and reviews on a wide variety of topics. One of his last papers was "The Psychology of William James as a basis for his philosophy", read in a symposium at the December 1941 meeting of the American Philosophical Association.

Those who know Mr. Brett through his major literary work tend to associate

him exclusively with the field of psychology. Yet it was philosophy which constituted his dominant interest. He taught it brilliantly for many years, combining a wide and minute knowledge of its history with an exceptional skill for discerning essential issues and stating these in clear and illuminating terms. His interest in the history of psychology was a phase of a more general interest in the history of science. Here, as in the field of technical philosophy, his fund of knowledge was awe-inspiring. The thinkers who influenced him most were Aristotle, Lotze, and Bergson. His own philosophical position was a form of dynamic pluralism; and he was unequivocal in rejecting monistic idealism, epistemological dualism, and instrumentalism.

As a person, Mr. Brett inspired universal respect and affection, for he had great integrity, openmindedness, and generosity. His friendliness and sympathy were rather enhanced by a certain personal reserve, which seemed a quality wholly appropriate to him. This was accompanied by a ready and urbane wit that made him an effective *raconteur*, never lacking the *bon mot* and the appropriate anecdote. Many students and colleagues will recall having profited from his practical wisdom, as well as from the intellectual stimulus of his presence. His death is a great loss to the life of his own University, and to the world of philosophical learning.

THOMAS A. GOUDGE

On April 13, 1945, Ernst Cassirer was stricken fatally in the midst of his labors as Visiting Professor of Philosophy in Columbia University. Thus came to its end a life devoted completely, happily and wholeheartedly to philosophy. The decision to make this subject his personal and professional concern was made some fifty-one years before, in the summer of 1894, when as a student at the University of Berlin he decided, because of a reading of Hermann Cohen's works, to study philosophy under the latter's tutelage.

The records show, however, that it was not until two years later, in 1896, that he went to Marburg to study under Cohen. This fact is important because it throws considerable light upon Cassirer's conception of philosophy and its relation to science. Previous to his decision to become a philosopher he had specialized in the humanities, studying jurisprudence and German philology and literature at the Universities of Berlin, Leipzig, Heidelberg, and again at Berlin where he attended the lectures of Dilthey and Simmel. The informed student of Cassirer's biography, Dimitry Gawronsky, tells us, however, that it was none of these factors, but Cohen's books, which deeply interested Ernst Cassirer in philosophy. These books also convinced Cassirer of the necessity of knowing the exact sciences for an understanding not merely of the Kantian but also of the Platonic, Cartesian and Leibnizian philosophy. Consequently, even though Cassirer decided in 1894 to study philosophy under Hermann Cohen, he felt it necessary to spend two years at Berlin studying the mathematical calculus, mechanics, and mathematical physics before presenting himself to Cohen in Marburg in 1896.

This conviction of the necessity of a knowledge of exact science for the understanding of western philosophy remained with Cassirer to his death. He voiced it in the joint seminar in the Philosophy of Science at Yale University during his three years there as Visiting Professor of Philosophy, from 1941 to 1944, and in many personal conversations, even to the extent of supporting this approach to philosophy in the undergraduate curriculum at Yale.

Having thus grounded the basic tenets of his philosophy in a thorough understanding and epistemological analysis of the content and methods of the exact sciences, Cassirer then applied the philosophical conclusions of this procedure, conclusions essentially neo-Kantian in character, to the elucidation of the humanities which had been the object of his initial interest. The results show in his many profound published works. Two important items may be noted: (1) The early interest in philology became generalized under the impact of the neo-Kantian epistemology into the all-inclusive philosophy of language which appears in his classical study of symbolic forms. Similarly (2) his early study of jurisprudence, and of the Geisteswissenschaften under Dilthey and Simmel, becomes generalized

similarly into the philosophy of the state and of culture of the several books published near the end of his life.

Here then was a true philosopher, one whose mind and the range of whose interests had run full circle, starting in the humanities, turning then to philosophy, taking on science in order to understand this philosophy, and then bringing these scientifically rooted philosophical insights back into the humanities to make them intelligible and ablaze with meaning and value. And here also was a man, a very human, lovable, hearty and friendly man, one who must have had as many devoted friends as there were men in the world who had the privilege of knowing him. All such men will agree that truly great as was Ernst Cassirer as a philosopher, he was equally gifted as a friend.

F. S. C. NORTHROP

Dean Walter Taylor Marvin of Rutgers University died on May 26, 1944, a month after his seventy-second birthday and a few weeks before his announced retirement. Beloved for his kindness, his courtesy, his endless devotion to the affairs of students and faculty alike, he will be long remembered on the banks of the Raritan.

After graduating from Columbia College in 1893, he had a wide and rich experience in graduate work; a year at Jena; a year at General Theological Seminary in New York City; two years at Columbia University; and a final year at Halle and Bonn where he received his Ph.D. degree with a dissertation on "Die Giltigkeit unserer Erkenntnis der Objectiven Welt".

From 1898–99 Dr. Marvin was assistant to Professor Nicholas Murray Butler, head of the Department of Philosophy at Columbia; then for six years he taught philosophy at Adelbert College, Western Reserve University; and for five more at Princeton, where he was assistant professor and one of the first of the preceptors called by President Wilson to inaugurate the then new preceptorial system. In 1910 he became Collegiate Church Professor of Logical and Mental Philosophy at Rutgers College. He was Dean of the College from 1921–25; and in 1925, when Rutgers definitely assumed organization as a university, with divisions into distinct schools, he became the first Dean of the College of Arts and Sciences, a position he was to hold for nineteen years.

A thorough scholar, a lucid and tenacious thinker, Dean Marvin was not a prolific writer. *An Introduction to Systematic Philosophy* (1903) "not intended to be exactly a textbook" but a basis for critical and systematized discussion in class, was written from the viewpoint of "a rationalistic idealism" that made considerable concessions to naturalism. By 1910 he was meeting informally with Professors Holt, Montague, Perry, Pitkin, and Spaulding, for the purpose of developing a new kind of realism. The first result of these historic conferences was "A Program and First Platform of Six Realists" and then the volume of cooperative studies, *The New Realism* (1912), to which Marvin contributed the notable essays on "The Emancipation of Metaphysics from Epistemology". It was also in 1912 that Marvin brought out his extremely clear and stimulating little textbook, *A First Book in Metaphysics*, frankly realistic and pluralistic in viewpoint. A companion volume in *The History of European Philosophy* stressed scientific currents far more than was conventional and brought in social background somewhat in the manner of Bertrand Russell's much larger presentation. In 1918, when there was much heated yet often sterile controversy about mechanism and vitalism, Marvin's learned and judicious article on "Mechanism versus Vitalism as a Philosophical Issue" appeared in THE PHILOSOPHICAL REVIEW.

Although Dean Marvin's contributions to Rutgers were immense, his philosophical colleagues must regret that in the last twenty-four years of his life he was able to give less and less time to teaching and writing, because of the pressure of administrative details. But he remained a philosopher to the end, reading and reflecting as widely as ever, particularly in the fields of physics, biology and psychology.

HOUSTON PETERSON

ROGER W. HOLMES, *Secretary-Treasurer*

OFFICERS AND COMMITTEES OF THE ASSOCIATION FOR 1946

(Addresses are given in the list of members)

Board of Officers:

Everett J. Nelson, *Chairman*, G. P. Conger, Katharine Gilbert, Roger W. Holmes, George R. Geiger, E. W. Strong, Cornelius Krusé, *Secretary-Treasurer*.

Delegates to the American Council of Learned Societies:

C. J. Ducasse (1948), Glenn R. Morrow (1950).

Delegate to the Council of the American Association for the Advancement of Science:

F. S. C. Northrop.

Delegate to the American Documentation Institute:

R. P. Hawes.

Committees:

Bibliography—

H. W. Schneider, *Chairman*, C. J. Ducasse, W. P. Montague, W. R. Dennes, D. S. Robinson, Maurice Mandelbaum, Emerson Buchanan, *secretary*.

Carus Lectures—

E. L. Schaub, *Chairman*, C. J. Ducasse, E. A. Murphy, Irwin Edman, W. R. Dennes, H. G. Townsend, E. A. Burtt.

Publication—

Glenn R. Morrow, *Chairman* (1949), G. P. Adams (1946), R. W. Sellars (1947) Katharine Gilbert (1947), Max Black (1948)

Organizing Committee of the Second Inter-American Congress of Philosophy—

Cornelius Krusé, *Chairman*, W. Pepperell Montague, W. R. Dennes, Charles W. Hendel, Everett J. Nelson, Herbert W. Schneider, Radoslav A. Tsanoff.

LIST OF MEMBERS

Abarbanel, Prof. Albert, 319 W. 108th St., New York, N.Y.
Abernethy, Prof. George, Davidson College, Davidson, N.C.
Adams, Prof. Eugene Taylor, Colgate University, Hamilton, N.Y.
Adams, Prof. George P., University of California, Berkeley, Calif.
Adams, Dr. John Stokes, Jr., University of Pennsylvania, Philadelphia, Pa.
Adler, Prof. Mortimer J., 227 E. Delaware Pl., Chicago, Ill.
Ahlén, Dr. A. Carl M., University of Minnesota, Minneapolis, Minn.
Aiken, Prof. Henry D., Harvard University, Cambridge, Mass.
Aikens, Prof. H. Austin, 2611 Edgehill Rd., University Center Sta., Cleveland, Ohio.
Akers, Prof. S. L., Wesleyan College, Macon, Ga.
Albert, Dr. Sidney P., University of Connecticut, Storrs, Conn.
Aldrich, Prof. Virgil C., Kenyon College, Gambier, Ohio.
Alexander, Hubert G., University of New Mexico, Albuquerque, N.M.
Allan, Prof. Denison Maurice, Hampden-Sydney, Va.
Allen, Prof. Warren D., Stanford University, Calif.
Alles, Prof. Adam, 63 Lincoln St., Hingham, Mass.
Ambrose, Dr. Alice, Smith College, Northampton, Mass.
Ames, Prof. E. S., University of Chicago, Chicago, Ill.
Ames, Prof. Van Meter, University of Cincinnati, Cincinnati, Ohio.
Anderson, Prof. Frederick, Stanford University, Calif.
Anderson, Prof. Fulton H., University of Toronto, Toronto, Can.
Anderson, Professor John M., Pennsylvania State College, State College, Pa.
Anderson, Pres. Paul Russell, Pennsylvania College for Women, Pittsburgh, Pa.
Anderson, Dr. Wilhelm, Senior Agricultural Economist, Department of Agriculture, Washington, D.C.
Angier, Dr. R. P.
Anshen, Dr. Ruth Nanda, 14 E. 81st St., New York City.
Apostle, Prof. Hippocrates G., 37 Spring St., Amherst, Mass.
Arbaugh, Prof. George Bartholomew, 1114-15th Ave., Rock Island, Ill.
Arndt, Prof. Elmer J., Eden Theological Seminary, Webster Groves, Mo.
Aschenbrenner, Lt. Karl, USNR, 3054 Wheeler St., Berkeley 5, Calif.
Ascher, Dr. Anita, Smith College, Northampton, Mass.
Auld, Mrs. J. W., Red Cloud, Neb.
Avey, Prof. Albert E., Ohio State University, Columbus, Ohio.
Ayres, Prof. Edith, Palisades, N.Y.

Bachman, Prof. Walter E., York College, York, Neb.
Bāhm, Prof. Archie J., University of Denver, Denver, Colo.
Bajema, Prof. Jacob, University of Dubuque, Dubuque, Iowa.
Baker, Prof. John Tull, Pennsylvania State College, State College, Pa.
Bakewell, Prof. C. M., Yale University, New Haven, Conn.
Balduf, Dean E. W., Roosevelt College of Chicago, 231 S. Wells St., Chicago 4, Ill.
Baldwin, Prof. Robert C., University of Connecticut, Storrs, Conn.
Ballaine, Prof. Francis Knight, Adelphi College, Garden City, N.Y.
Ballard, Rev. J. Hudson, 283 Crescent Rd., San Anselmo, Calif.
Balz, Prof. Albert, University of Virginia, University, Va.
Bancroft, Prof. William Wallace, 942 Main St., Collegeville, Pa.
Barrett, Prof. Clifford L., Scripps College, Claremont, Calif.
Barrett, Prof. William C.

Barton, Prof. George E., Jr., 227 Pine St., Millville, N.J.
Barzin, Dr. Marcel, University of Brussels, Belgium.
Baum, Prof. Maurice, Kent State College, Kent, Ohio.
Baumgardt, Prof. David, 214 Massachusetts Ave., N.E., Washington 2, D.C.
Baxter, Dr. Clayton A., Thamesville, Ontario, Canada.
Baylis, Prof. Charles A., Brown University, Providence, R.I.
Beach, Prof. Waldo, Duke University, Durham, N.C.
Beals, Dr. Lawrence W., Williams College, Williamstown, Mass.
Beardslee, Prof. Claude G., 472 Vine St., Bethlehem, Pa.
Beardsley, Prof. Monroe C., Yale University, New Haven, Conn.
Beck, Prof. Lewis W., Duke University, Durham, N.C.
Beck, Dr. Maximilian, University of Illinois, Urbana, Ill.
Beck, Prof. R. Lloyd, Marshall College, Huntington, W.Va.
Becker, Prof. Frank C., Lehigh University, Bethlehem, Pa.
Beiswanger, Dr. G. W., c/o Georgia State College for Women, Milledgeville, Ga.
Benjamin, Prof. A. C., University of Missouri, Columbia, Mo.
Belknap, Mr. George N., University of Oregon, Eugene, Ore.
Benne, Lt. (j.g.) Kenneth D., U. S. Naval Training School, Noroton Heights, Conn.
Bennion, Prof. Milton, 2385-7th East, Salt Lake City, Utah.
Bentley, Prof. John E., American University, Washington, D.C.
Benton, Prof. John Keith, Wesley Hall, Vanderbilt University, Nashville, Tenn.
Berenda, Dr. Carlton W., University of Oklahoma, Norman, Okla.
Bergmann, Prof. Gustav, State University of Iowa, Iowa City, Iowa.
Berndtson, Dr. Arthur, University of Missouri, Columbia, Mo.
Bernhardt, Prof. William Henry, 2180 S. Clayton, Denver, Colo.
Bernstein, Prof. B. A., University of California, Berkeley, Calif.
Bertocci, Dr. Peter A., 243 Park Ave., Arlington Heights, Mass.
Bettelheim, Prof. Bruno, 1365 E. 60th St., Chicago, Ill.
Bewkes, Pres. E. G., St. Lawrence University, Canton, N.Y.
Bidney, Dr. David, 420 W. 119th St., New York 27, N.Y.
Bisbee, Prof. Eleanor, 1137 Nevada Ave., San Jose 10, Calif.
Biser, Dr. Erwin, 1641 W. Venango St., Philadelphia, Pa.
Bixler, Prof. J. S., 33 College Ave., Waterville, Me.
Black, Dr. G. A., 156 Park St., Gardner, Mass.
Black, Prof. Max, Cornell University, Ithaca, N.Y.
Blake, Prof. R. M., Brown University, Providence, R.I.
Blanshard, Prof. Brand, Yale University, New Haven, Conn.
Blanshard, Mrs. Frances B., St. Ronan St., New Haven, Conn.
Blau, Dr. Joseph L., 1149 Brunswick Ave., Far Rockaway, N.Y.
Block, Dr. Marguerite, 401 Low Memorial Library, Columbia University, New York City.
Bloté, Dr. Harold C., 228 Scenic Ave., Piedmont, Calif.
Blyth, Prof. John W., College Hill, Clinton, N.Y.
Boas, Prof. George, Johns Hopkins University, Baltimore, Md.
Bogholt, Prof. Carl, University of Wisconsin, Madison, Wis.
Bogoslovsky, Dr. Boris B., Cherry Lawn, Darien, Conn.
Bolman, Dr. Frederick deWolfe, Jr., 615 Hamilton Hall, Columbia University, New York 27, N.Y.
Bonner, Prof. Hubert, University of Chicago, Chicago, Ill.
Boodin, Prof. J. E., University Club, 614 S. Hope St., Los Angeles, Calif.
Bosely, Dr. Harold, Mt. Vernon Place Church, Baltimore, Md.
Boswell, Prof. Foster P., Hobart College, Geneva, N.Y.
Boughton, Prof. Jesse Scott, Westminster College, Salt Lake City, Utah.
Bourke, Prof. Vernon J., St. Louis University, St. Louis, Mo.
Bouwsma, Prof. O. K., University of Nebraska, Lincoln, Neb.
Bowden, Prof. D. J., Elon College, Elon, N.C.
Boynton, Prof. Richard W., University of Buffalo, Buffalo, N.Y.
Bradshaw, Prof. M. J., Bangor Theological Seminary, Bangor, Me.

Brameld, Prof. Theodore B., University of Minnesota, Minneapolis, Minn.
Brandt, Prof. Richard B., Swarthmore College, Swarthmore, Pa.
Brautigam, Prof. Herman A., Colgate University, Hamilton, N.Y.
Brennan, Prof. Joseph G., College of New Rochelle, New Rochelle, N.Y.
Brightman, Prof. Edgar S., Box 33, Newton Center, Mass.
Brinton, Prof. Howard, Pendle Hill, Wallingford, Pa.
Brogan, Prof. A. P., University of Texas, Austin, Tex.
Bronstein, Dr. D. J., College of the City of New York, New York City.
Brotherston, Prof. Bruce W., Tufts College, Medford, Mass.
Broudy, Dr. Harry S., State Teachers College, North Adams, Mass.
Brown, Prof. A. E., 701 W. Center St., Alma, Mich.
Brown, Principal James G., Union College, Vancouver, B.C.
Brown, Prof. Kenneth Archibald, Macalester College, St. Paul, Minn.
Browne, Prof. Samuel S. S., Colorado College, Colorado Springs, Colo.
Browning, Prof. Robert W., Syracuse University, Syracuse, N.Y.
Bryan, Pres. W. L., Indiana University, Bloomington, Ind.
Buchanan, Mr. Emerson, Room 228M, South Hall, Columbia University, New York City.
Buchanan, Prof. Scott M., St. Johns College, Annapolis, Md.
Buchler, Dr. Justus, Columbia University, New York, N.Y.
Buckley, Prof. Joseph W., Notre Dame Seminary, New Orleans, La.
Burch, Dr. George B., College of Idaho, Caldwell, Idaho.
Bures, Prof. Charles E., 415 S. Orange Grove Ave., Los Angeles 36, Calif.
Burkhardt, Dr. Frederick H., University of Wisconsin, Madison, Wis.
Burks, Dr. Arthur W., Institute for Advanced Study, Princeton, N.J.
Burnham, Prof. James, New York University, Washington Sq., New York City.
Burtt, Prof. E. A., Cornell University, Ithaca, N.Y.
Buschman, Prof. Harold, University of Kansas City, Kansas City, Mo.
Bussey, Prof. Gertrude C., Goucher College, Baltimore, Md.
Butler, Pres. N. M., Columbia University, New York City.
Butt, Dr. S. McClellan, 1908 Florida Ave. N.W., Washington, D.C.
Butterfield, President Victor L., Wesleyan University, Middletown, Conn.

Cairns, Prof. Dorion.
Calhoun, Dr. Robert L., Yale University, New Haven, Conn.
Campbell, Prof. Ivy G., Wells College, Aurora-on-Cayuga, N.Y.
Cannabrava, Dr. Euryalo, Rainha Elisabeth, 62, ap. 5, Rio de Janeiro, Brazil.
Cannom, Dean C. W., Park College, Parkville, Mo.
Carmichael, Prof. Peter A., Louisiana State University, University, La.
Carmichael, Prof. R. D., University of Illinois, Urbana, Ill.
Carnap, Prof. Rudolf, University of Chicago, Chicago, Ill.
Case, Prof. Mary S., 70 Church St., Wellesley, Mass.
Castell, Prof. Alburey, University of Minnesota, Minneapolis, Minn.
Cattell, Dr. J. McKeen, Garrison-on-Hudson, N.Y.
Cerf, Dr. Walter H., University of Minnesota, Minneapolis, Minn.
Chambers, Prof. L. P., Washington University, St. Louis, Mo.
Chandler, Prof. Albert R., Ohio State University, Columbus, Ohio.
Chanter, Prof. William G., 5 Academy Road, Madison, N.J.
Chapman, Prof. Emanuel, Hunter College, New York City.
Chapman, Dr. Frank M.
Chapman, Prof. Harmon M., New York University, University Heights, New York City.
Child, Dr. Arthur, 1621, Landa St., Los Angeles 26, Calif.
Childs, Prof. John L., Teachers College, Columbia University, New York City.
Chisholm, Lt. Roderick M., 14 South Street, Plainville, Mass.
Christ, Dr. Paul S., Liberty High School, Bethlehem, Pa.
Christian, Prof. William A., Jr., Smith College, Northampton, Mass.
Church, Prof. Ralph W., Santa Barbara, Calif.
Churchman, Dr. C. West, University of Pennsylvania, Philadelphia, Pa.
Clapp, Dr. James Gordon, Hunter College, New York City.

Clark, Prof. Gordon H., Butler University, Indianapolis, Ind.
Clark, Prof. John A., 56 Leighton Rd., Wellesley, Mass.
Clarke, Prof. Francis P., University of Pennsylvania, Philadelphia, Pa.
Clarke, Prof. Mary E., Smith College, Northampton, Mass.
Cleve, Dr. Felix, 634 Columbus Ave., New York 24, N.Y.
Cobb, Dr. Henry V., Carleton College, Northfield, Minn.
Coffman, Dr. David R., 312 Mt. Prospect Ave., Newark, N.J.
Cohen, Dr. Felix S., Office of Solicitor, Dept. of Interior, Washington, D.C.
Cohen, Prof. Joseph W., University of Colorado, Boulder, Colo.
Cohen, Prof. Morris R., 2617-39th St., N.W., Washington, D.C.
Collins, Dr. James, St. Louis University, St. Louis, Mo.
Conger, Prof. G. P., University of Minnesota, Minneapolis, Minn.
Connette, Prof. Earle, University of Missouri, Columbia, Mo.
Coolidge, Dean Mary Lowell, Wellesley College, Wellesley, Mass.
Cope, Dr. J. Raymond, 1317 E. 6th-So., Salt Lake City, Utah.
Cory, Prof. C. E., Washington University, St. Louis, Mo.
Costello, Prof. H. T., Trinity College, Hartford, Conn.
Cowan, Prof. Thomas A., University of Pennsylvania, Philadelphia, Pa.
Cowling, Pres. D. J., 444 Otis Ave., St. Paul 4, Minn.
Craig, Dr. Wallace, 10 Bowdoin St., Cambridge 38, Mass.
Crawford, Prof. Lucy S., Sweet Briar College, Sweet Briar, Va.
Creed, Dr. Isabel, 128 Indian Rd., Piedmont, Calif.
Cresswell, Prof. John R., West Virginia University, Morgantown, W.Va.
Crissman, Prof. Paul, University of Wyoming, Laramie, Wyo.
Crowley, Prof. W. A., 5819 Glenview Ave., College Hill, Cincinnati, Ohio.
Cunningham, Dean G. Watts, Cornell University, Ithaca, N.Y.
Currie, Dr. Cecil, McGill University, Montreal, Canada.
Curry, Prof. Haskell B., 6709 N. 6th St., Philadelphia 26, Pa.
Cushman, Dr. Robert, Duke University, Durham, N.C.
Cutler, Prof. Anna A., 407 Whitney Ave., New Haven, Conn.

Dakin, Dr. Arthur Hazard, Darley-in-the-Dale, Amherst, Mass.
Davenport, Prof. Charles K., Box 1233, University of Virginia, University, Va.
Davidson, Prof. Robert F., Stephens College, Columbia, Mo.
De Boer, Prof. C., University of Arkansas, Fayetteville, Ark.
Deglman, Prof. G. A., Rockhurst College, Kansas City, Mo.
DeLacy, Prof. Estelle Allen, Roosevelt College, 231 S. Wells St., Chicago, Ill.
Demos, Prof. Raphael, Harvard University, Cambridge, Mass.
Dennes, Prof. W. R., University of California, Berkeley, Calif.
Dewey, Prof. John, 1158 Fifth Ave., New York 29, N.Y.
DeWolf, Prof. L. Harold, Boston University, Boston, Mass.
Dickinson, Prof. F. W., University of Denver, Denver, Colo.
Diller, Prof. Elliott Van N., Mills College, Oakland, Calif.
Dodd, Mrs. Edwin M., Jr., 999 Memorial Dr., Cambridge, Mass.
Doescher, Prof. Waldemar D., Capital University, Columbus, Ohio.
Dolson, Dr. Grace N., St. Mary's Free Hospital for Children, Inc., 407 W. 34th St., New York City.
von Domarus, Dr. E., 471 Park Ave., New York 22, N. Y.
Dommeyer, Dr. Frederick C., 21 Elm St., Canton, N.Y.
Dotterer, Prof. Ray H., 825 W. Foster Ave., State College, Pa.
Dowling, Mr. John W., Williams College, Williamstown, Mass.
Drabkin, Dr. Israel E., 44 W. 96th St., New York 25, N.Y.
Druckmann, Prof. A., Pennsylvania State College, State College, Pa.
Dubs, Prof. Homer H., Hartford Seminary Foundation, Hartford 5, Conn.
Ducasse, Prof. C. J., Brown University, Providence, R.I.
Dunham, Prof. Barrows, 109 Bentley Rd., Cynwood, Pa.
Dunham, Dr. James H., Temple University, Philadelphia, Pa.
Duvall, Prof. T. G., Ohio Wesleyan University, Delaware, Ohio.
Dwight, Prof. Charles A. S., Box 216, Oak Bluffs, Mass.
Dykhuizen, Prof. George, University of Vermont, Burlington, Vt.

Eaton, Prof. Howard O., University of Oklahoma, Norman, Okla.
Eckhardt, Prof. L. R., DePauw University, Greencastle, Ind.
Eckstein, Dr. Walter, 3900 Greystone Ave., New York City.
Edel, Prof. Abraham, College of the City of New York, New York City.
Edgar, Dr. Earl, University of Chicago, Chicago, Ill.
Edman, Prof. Irwin, Columbia University, New York City.
Eggleston, Sister Mary Frederick, 2935 Upton St. N.W., Dunbarton College, Washington, D.C.
Elder, Prof. Lucius W., Knox College, Galesburg, Ill.
Elkus, Dr. Savilla A.
Ely, Prof. S. Lee, University of Wisconsin, Madison, Wis.
Emch, Dr. Arnold F., 1210 Astor St., Chicago 10, Ill.
Emery, Prof. Stephen A., University of North Carolina, Chapel Hill, N.C.
Ericksen, Prof. E. E., University of Utah, Salt Lake City, Utah.
Erickson, Dr. Harris D., Seattle Pacific College, Seattle, Wash.
Erickson, Prof. Ralph W., Carleton College, Northfield, Minn.
Eshleman, Prof. Martin, Carleton College, Northfield, Minn.
Estall, Dr. Henry M., Queen's University, Kingston, Ont., Can.
Evans, Prof. D. Luther, Ohio State University, Columbus, Ohio.
Evans, Dr. W. Vince, University of Southern California, Los Angeles, Calif.
Everett, Prof. Millard S., University of Minnesota, Minneapolis, Minn.

Fales, Dr. Walter, 361 Lancaster Ave., Haverford, Pa.
Fallico, Dr. Arturo B., 2142 E. 69th St., Chicago 49, Ill.
Farber, Prof. Marvin, University of Buffalo, N.Y.
Feibleman, Mr. James K., 1424 Canal Bldg., New Orleans, La.
Feigl, Prof. Herbert, University of Minnesota, Minneapolis, Minn.
Fenlon, Prof. Edward J., 1976 E. 23rd St., Brooklyn, N.Y.
Ferm, Prof. Vergilius, College of Wooster, Wooster, Ohio.
Ferré, Prof. Nels F. S., 44 Stearns St., Newton Center, Mass.
Feuer, Dr. Lewis S.
Finch, Prof. Henry A., The College, University of Chicago, Chicago, Ill.
Firth, Dr. Roderick, 320 N. Chester Rd., Swarthmore, Pa.
Fisch, Prof. M. H., University of Illinois, Urbana, Ill.
Fisher, Dr. Donald Warren, Noe Ave., Madison, N.J.
Fitch, Dr. Frederic B., Silliman College, Yale University, New Haven, Conn.
Fitch, Prof. Robert E., Occidental College, Los Angeles, Calif.
Fite, Prof. Warner, Hopewell, N.J.
Flewelling, Prof. Ralph T., University of Southern California, Los Angeles, Calif.
Flower, Dr. Elizabeth, University of Pennsylvania, Philadelphia, Pa.
Fort, Prof. William Edwards, Jr., Rollins College, Winter Park, Fla.
Foss, Dr. Martin, 1a College Lane, Haverford, Pa.
Frank, Dr. Erich, Bryn Mawr College, Bryn Mawr, Pa.
Frankel, Dr. Charles, Dept. of Philosophy, Columbia University, New York 27, N.Y.
Frankena, Prof. Wm., University of Michigan, Ann Arbor, Mich.
Fránquiz, Prof. José A., 612 Mass Ave., Boston, Mass.
Fries, Prof. Horace S., University of Wisconsin, Madison, Wis.
Friess, Prof. Horace L., Columbia University, New York City.
Fritz, Mrs. Charles A., Jr., 78–10 34th Ave., Jackson Heights, N.Y.
Frye, Prof. A. Myrton, 2525 College Ave., Berkeley, Calif.
Fuller, Prof. B. A. G., University of Southern California, Los Angeles, Calif.
Fulton, Dr. James S., Rice Institute, Houston, Texas.

Gabbert, Prof. M. R., University of Pittsburgh, Pittsburgh, Pa.
Gamerstfelder, Pres. W. S., Ohio University, Athens, Ohio.
Garlan, Dr. Edwin N., Columbia University, New York, N.Y.
Garnett, Prof. A. C., University of Wisconsin, Madison, Wis.
Garnett, Prof. Christopher Browne, Jr., The George Washington University, Washington, D.C.

Garvin, Prof. Lucius, Oberlin College, Oberlin, Ohio.
Gauss, Prof. Charles E., George Washington University, Washington, D.C.
Geiger, Prof. G. R., Antioch College, Yellow Springs, Ohio.
Gentry, Prof. George, University of Texas, Austin, Tex.
Geyer, Prof. Denton L., Chicago Normal School, 68th and Stewart Ave., Chicago, Ill.
Gifford, Prof. A. R., University of Vermont, Burlington, Vt.
Gilbert, Dr. Katharine E., 516 Carolina Circle, Durham, N.C.
Gildmeister, Prof. Theda, 311 W. Tremont St., Hillsboro, Ill.
Girvetz, Dr. Harry, Santa Barbara State College, Santa Barbara, Calif.
Glick, Prof. Harry N., 30 N. Hadley Rd., Amherst, Mass.
Gloyn, Prof. Cyril K., Pacific University, Forest Grove, Ore.
Godcharles, Prof. C. A., James Millikin University, Decatur, Ill.
Goertz, Dean P. S., Bethel College, North Newton, Kan.
Goheen, Dr. John, Queens College, Flushing, N.Y.
Gonso, Prof. Raymond, Michigan State College, E. Lansing, Mich.
Goodman, Dr. Nelson, 154 Brattle St., Cambridge, Mass.
Gotesky, Prof. Rubin, New York University, Washington Square College, New York City.
Gotshalk, Prof. D. W., University of Illinois, Urbana, Ill.
Goudge, Prof. Thomas A., University of Toronto, Toronto, Ont., Canada.
Gould. Prof. William D., Dickinson College, Carlisle, Pa.
Gramlich, Prof. Francis W., Dartmouth College, Hanover, N.H.
Gray, Dr. J. Glenn, Swarthmore College, Swarthmore, Pa.
Gray-Smith, Prof. Rowland, Hingham, Mass.
Greene, Prof. Theodore M., Yale University, New Haven, Conn.
Grene, Prof. Marjorie, R.R. 1, Lemont, Ill.
Griffith, Prof. C. R., University of Illinois, Urbana, Ill.
Gross, Dr. Mason W., Rutgers University, New Brunswick, N.J.
Groth, Prof. John Henry, Eastern Washington College of Education, Cheney, Wash.
Gruen, Dr. William, 5531 65th Place, Maspeth, Queens, New York, N.Y.
Gurvitch, Prof. George, International Universities Press, 227 West 13th St., New York 11, N.Y.
Gurwitch, Dr. Aron, 10 Agassiz St., Cambridge, Mass.
Guthrie, Dean Hunter, Georgetown University, Washington 7, D.C.
Guthrie, Prof. E. R., University of Washington, Seattle, Wash.
Gutmann, Prof. James, Columbia University, New York City.

Haag, Prof. Alvin S., North Central College, Naperville, Ill.
Hafkesbrink, Prof. Hanna, Connecticut College, New London, Conn.
Hahn, Prof. Lewis E., University of Missouri, Columbia, Mo.
Hall, Prof. Everett W., University of Iowa, Iowa City, Iowa.
Hamblin, Prof. Frances Murphy, Quarters H, N.T.S., Newport, R.I.
Hammerschmidt, Dr. William, Norwich University, Northfield, Vt.
Hammond, Dr. Lewis M., University of Virginia, University, Va.
Hantz, Prof. Harold D., University of Mississippi, University, Miss.
Haring, Mrs. Ellen Stone, 672 Washington St., Wellesley 81, Mass.
Harkness, Prof. Georgia E., Garrett Biblical Institute, Evanston, Ill.
Harmon, Dr. Frances B., Scarborough, N.Y.
Harris, Prof. Marjorie S., Randolph-Macon Woman's College, Lynchburg, Va.
Harris, Pres. M. LaFayette, Philander Smith College, Little Rock, Ark.
Hart, Prof. Charles A., Catholic University of America, Washington, D.C.
Hartman, Prof. H. G., 542 Northeast 107 St., Miami, Fla.
Hartman, Dr. Robert S., College of Wooster, Wooster, Ohio.
Hartshorne, Prof. Charles, University of Chicago, Chicago, Ill.
Hartt, Dr. Julian N., Yale University Divinity School, 409 Prospect St., New Haven, Conn.
Harvanele, Dr. Robert F., West Baden College, W. Baden Springs, Ind.
Haserot, Dr. Francis S., William and Mary College, Williamsburg, Va.

UMI

Havice, Prof. Charles William, Northeastern University, Boston, Mass.
Hawes, Prof. R. P., Goucher College, Baltimore, Md.
Hawkins, Prof. David, University of California, Berkeley, Calif.
Hay, Dr. William Henry, 245 Ogden Ave., Swarthmore, Pa.
Hazelton, Prof. Roger, Andover Newton Theological School, Newton Centre 59, Mass.
Headley, Prof. Leal A., Carleton College, Northfield, Minn.
Healey, Prof. Francis G., British Embassy, Washington, D.C.
Heath, Prof. Louise R., Hood College, Frederick, Md.
Hefelbower, Prof. Samuel G., Wagner College, Staten Island, N.Y.
Helsel, Prof. Paul R., 5502 Rimpau Blvd., Los Angeles 43, Calif.
Hempel, Prof. Carl G., Queens College, Flushing, N.Y.
Hendel, Prof. Charles W., Yale University, New Haven, Conn.
Henderson, Prof. Edgar, 213 Oberlin Rd., Raleigh, N.C.
Henderson, Dr. Thomas G., 1556 Summerhill Ave., Montreal, Can.
Henle, Prof. Paul, Northwestern University, Evanston, Ill.
Henry, Prof. Carl F. H., 3040 Washington Blvd., Chicago, Ill.
Hepp, Prof. Maylon H., Denison University, Granville, Ohio
Hickson, Dr. J. W. A., 3428 Ontario Ave., Montreal, Can.
Hildebrand, Prof. Carroll DeWitt, DePauw University, Greencastle, Ind.
von Hildebrand, Prof. Dietrich, 448 Central W., New York City.
Hill, Dr. A. R., 618 Pioneer Trust Bldg., Kansas City, Mo.
Hill, Dr. Walker H., 3607 Seminary Ave., Richmond, Va.
Hillman, Dr. Owen N., Department of Philosophy, Judson College, Rangoon, Burma.
Hinman, Prof. E. L., University of Nebraska, Lincoln, Neb.
Hite, Prof. L. F., 42 Arlington St., Cambridge, Mass.
Hocking, Prof. Richard, University of California at Los Angeles, West Los Angeles, Calif.
Hocking, Prof. W. E., Madison, N.H.
Hodgson, Prof. James B., Coe College, Cedar Rapids, Iowa.
Hoekstra, Prof. Raymond, Wayne University, Detroit, Mich.
Hofstadter, Prof. Albert, New York University, Washington Sq., New York City.
Hoke, Prof. Roy Edward, Davidson College, Davidson, N.C.
Holbrook, Dean Clyde A., Shove Chapel, Colorado College, Colorado Springs, Colo.
Holcomb, Prof. Louise, Wilson College, Chambersburg, Pa.
Hollands, Prof. E. H., University of Kansas, Lawrence, Kan.
Holmer, Dr. Paul L., Yale University, New Haven, Conn.
Holmes, Prof. Eugene C., Howard University, Washington, D.C.
Holmes, Prof. Roger W., Mount Holyoke College, South Hadley, Mass.
Holtzclaw, Prof. B. C., University of Richmond, Richmond, Va.
Hong, Prof. Howard B., St. Olaf College, Northfield, Minn.
Hook, Prof. Sidney, New York University, Washington Sq., New York City.
Hope, Prof. Richard, University of Pittsburgh, Pittsburgh, Pa.
Horkheimer, Dr. Max, 13524 D'Este Drive, Pacific Palisades, Calif.
Horne, Prof. H. H., 341 Summit Ave., Leonia, N.J.
Houf, Prof. H. T., 17 Second St., Athens, Ohio.
Howard, Prof. D. T., Northwestern University, Evanston, Ill.
Howell, Dr. C. T., 1st Presbyterian Church, 214 W. 6th St., Rochester, Md.
Hudson, Prof. J. W., University of Missouri, Columbia, Mo.
Hughes, Prof. Percy, Belvedere, N.J.
Hutchison, Prof. John A., College of Wooster, Wooster, Ohio.

Iredell, Prof. Francis R., Pomona College, Claremont, Calif.
Irving, Prof. John Allan, Victoria College, University of Toronto, Toronto, Can.

Jaffe, Dr. Haym, 69 Merwood Dr., Upper Darby, Pa.
Jefferson, Prof. Howard B., Colgate University, Hamilton, N.Y.
Jeffery, Prof. Harriet, University of Colorado, Boulder, Colo.
Jellema, Prof. Harry, University of Indiana, Bloomington, Ind.

Jenkins, Prof. Iredell, Yale University, New Haven, Conn.
Jessup, Prof. Bertram E., University of Oregon, Eugene, Ore.
Johnson, Dr. Allison Heartz, University of Western Ontario, London, Can.
Johnson, Prof. George, c/o P. C. Garrett, Malvern, R.R. 2, Chester County, Pa.
Johnson, Prof. Paul E., 130 Day St., Auburndale, Mass.
Johnson, Prof., R. B. C., Kittery Point, Me.
Jones, Prof. A. H., University of Rochester, Rochester, N.Y.
Jones, Prof. Rufus M., Haverford College, Haverford, Pa.
Jones, Dr. William T., Pomona College, Claremont, Calif.
Jordan, Prof. E., Butler University, Indianapolis, Ind.
Jordan, Prof. H. P., Washington Square College, New York University, New York City.

Kallen, Prof. Horace, 66 W. 12th St., New York City.
Kantonen, Prof. T. A., Wittenberg College, Springfield, Ohio.
Kantor, Prof. J. R., Indiana University, Bloomington, Ind.
Kattsoff, Dr. Louis O., University of North Carolina, Chapel Hill, N.C.
Kaufmann, Prof. Felix, 533 W. 232nd St., New York City.
Kaufmann, Prof. Fritz, Northwestern University, Evanston, Ill.
Kearney, Prof. Chester M., Aurora College, Aurora, Ill.
Keeton, Dr. Morris T., Antioch College, Yellow Springs, Ohio.
Kemmerer, Dr. Mabel C., State Laboratory, Old Capital, Jackson, Miss.
Kennedy, Prof. Gail, Amherst College, Amherst, Mass.
Kerby-Miller, Prof. S., 11445 S.W. Riverwood Rd., Portland, Ore.
Keyser, Prof. Cassius J., Columbia University, New York City.
Kimpel, Dr. Ben F., Drew University, Madison, N.J.
King, Prof. Albion R., Cornell College, Mount Vernon, Iowa.
Kirn, Dean G. J., North Central College, Naperville, Ill.
Klausner, Prof. Neal W., Grinnell College, Grinnell, Iowa.
Knight, Prof. Edward C., Calle Montes de Oca, 168 Mexico City, D.F.
Knight, Prof. Frank H., University of Chicago, Chicago, Ill.
Knode, Prof. Jay C., University of New Mexico, Albuquerque, N.M.
Knudson, Dean Emeritus Albert C., 8 Maple Ave., Cambridge, Mass.
Koch, Dr. Adrienne, 28 East 10th St., New York 3, N.Y.
Koch, Dr. G. Adolf, 55 E. 10th St., New York City.
Konvitz, Prof. Milton R., Cornell University, Ithaca, N.Y.
Kotkov, Dr. Benjamin, 133 Lucerne St., Dorchester, Mass.
Koyré, Prof. Alexandre, New School for Social Research, New York, N.Y.
Kraft, Dr. Julius, 120 Stonelea Place, New Rochelle, N.Y.
Kraushaar, Prof. Otto F., Smith College, Northampton, Mass.
Kretschmann, Prof. Philip M., Brooklyn College, Brooklyn, N.Y.
Krikorian, Prof. Yervant H., College of the City of New York, New York City.
Kristeller, Dr. Paul Oskar, Columbia University, New York City.
Kroner, Prof. Richard, 99 Claremont Ave., New York, N.Y.
Krug, Prof. C. A., Royal Military College of Canada, Kingston, Ontario.
Krusé, Prof. Cornelius, Wesleyan University, Middletown, Conn.
Kubitz, Prof. Oscar, University of Illinois, Urbana, Ill.
Kuhn, Prof. Helmut, University of North Carolina, Chapel Hill, N.C.

Lafferty, Prof. T. T., Hood College, Frederick, Md.
Lafleur, Prof. Laurence J., Antioch College, Yellow Springs, Ohio.
de Laguna, Prof. Grace A., 221 Roberts Rd., Bryn Mawr, Pa.
Lamont, Dr. Corliss, 450 Riverside Dr., New York City.
Lamont, Mrs. Robert P., Jr., Rt. #1, Thiensville, Wis.
Lamprecht, Prof. Sterling P., Amherst College, Amherst, Mass.
Landon, Dr. K. P., 4711 Fulton St., N.W., Washington 7, D.C.
Lane, Prof. W. B., Picton, Ontario, Can.
Langer, Dr. Susanne K., 9 Hawthorne Lane, Concord, Mass.
Langford, Prof. Cooper H., University of Michigan, Ann Arbor, Mich.
Larrabee, Prof. Harold A., Union College, Schenectady, N.Y.

Lavely, Prof. Horace T., Allegheny College, Meadville, Pa.
Lazerowitz, Prof. Morris, Smith College, Northampton, Mass.
Leavenworth, Dr. Isabel F., 277 Park Ave., New York City.
LeBoutillier, Prof. Cornelia G., University of Delaware, Newark, Del.
Leckie, Prof. G. G., 44 Washington Sq. S., New York, N.Y.
Lee, Prof. Otis Hamilton, Vassar College, Poughkeepsie, N.Y.
Leidecker, Prof. Kurt, Rensselaer Polytechnic Institute, Troy, N.Y.
Leighton, Prof. J. A., 817 Oxford St., Worthington, Ohio.
Lenzen, Prof. V. F., University of California, Berkeley, Calif.
Leonard, Prof. Henry S., Duke University, Durham, N.C.
Lepley, Prof. Ray, Bradley Polytechnic Institute, Peoria, Ill.
Levi, Dr. Albert W., University of Chicago, Chicago, Ill.
Levinson, Prof. Ronald B., University of Maine, Orono, Me.
Lewis, Prof. Clarence I., Harvard University, Cambridge, Mass.
Lewis, Dr. Leicester C., 477 Hudson St., New York 14, N.Y.
Leys, Dean W. A. R., Roosevelt College of Chicago, 231 S. Wells St., Chicago 4, Ill.
Liddell, Prof. A. Forbes, Florida State College for Women, Tallahassee, Fla.
Litman, Dr. Alexander, 80-11 189th St., Jamaica, L.I., N.Y.
Locke, Prof. Alain Leroy, 1326 R St., N.W., Washington, D.C.
Lodge, Prof. R. C., University of Manitoba, Winnipeg, Can.
Loemker, Prof. Leroy E., Emory University, Atlanta, Ga.
Loewenberg, Prof. J., University of California, Berkeley, Calif.
Long, Prof. W. H., University of Southern California, Los Angeles, Calif.
Lovejoy, Prof. A. O., 827 Park Ave., Baltimore, Md.
Lowe, Dr. Victor, Ohio State University, Columbus, Ohio.
Lowinger, Dr. Armand.
Löwith, Prof. Karl, Hartford Seminary Foundation, Hartford, Conn.
Lucas, Prof. Martha B., 140 Hesketh St., Chevy Chase, Md.
Lyman, Prof. Eugene W., Sweet Briar College, Sweet Briar, Va.
Lynch, Dr. Jarmon A., 2001 Bolsover St., Houston, Tex.
Lynd, Dr. Helen Merrell, Sarah Lawrence College, Bronxville 8, N.Y.

McClure, Dean M. T., University of Illinois, Urbana, Ill.
McCracken, Prof. Anna, University of Kansas, Lawrence, Kan.
McCulloh, Prof. Gerald O., Hamline University, St. Paul, Minn.
McEwen, Pres. Robert Ward, Blackburn College, Carlinville, Ill.
McGill, Prof. V. J., Hunter College, New York City.
McGilvary, Prof. E. B., 1920 Arlington Pl., Madison, Wis.
McKeon, Prof. Charles, University of Idaho, Moscow, Idaho.
McKeon, Dean Richard, University of Chicago, Chicago, Ill.
McKown, Dean Edgar Monroe, Evansville College, Evansville, Ind.
McLarty, Dr. Furman Gordon, Duke University, Durham, N.C.
McWilliams, Prof. J. A., St. Louis University, St. Louis, Mo.
Macintosh, Prof. Douglas C., 25 Woodlawn St., Hamden, Conn.
Mack, Prof. Robert, 183 Williams St., New London, Conn.
Mackay, Prof. D. S., University of California, Berkeley, Calif.
MacLennan, Prof. Roderick, McGill University, Montreal, Canada.
MacMillan, Dr. D. F., 5553 Kenwood Ave., Chicago, Ill.
Magid, Dr. Henry M.
Mahan, Prof. W. B., University of Arkansas, Fayetteville, Ark.
Malcolm, Dr. Norman.
Mallett, Dr. Marcus B.
Manasse, Dr. Ernest M., 1808 Washington St., Durham, N.C.
Mandelbaum, Prof. Maurice H., Swarthmore College, Swarthmore, Pa.
Manry, Prof. James C., Forman College, Lahore, India.
Marcuse, Dr. Herbert.
Margolius, Dr. Hans, 624 S.W. 14th Ave., Miami 35, Fla.
Marhenke, Prof. Paul, University of California, Berkeley, Calif.

Maritain, Prof. Jacques, French Ambassador to the Holy See, Palazzo Taverna, Via di Monte Giordano, Roma, Italy.
Marlatt, Dean Earl, Boston University School of Theology, Boston, Mass.
Marshall, Dr. Donald K., Chicago Teachers College, Chicago, Ill.
Marshall, Prof. John S., Albion College, Albion, Mich.
Marti, Prof. Fritz, Brinklow, Md.
Martin, Prof. Herbert, University of Iowa, Iowa City, Iowa.
Martin, Prof. William Oliver, 24 Woodward Ave., Athens, Ohio.
Marvin, Edwin L., Montana State University, Missoula, Mont.
Maslow, Prof. Alexander P., University of British Columbia, Vancouver, B.C.
Mason, Prof. M. Phillips, Bowdoin College, Brunswick, Me.
Mauzey, Prof. Jesse V., Skidmore College, Saratoga Springs, N.Y.
Mead, Prof. Hunter, San Diego State College, San Diego, Calif.
Means, Dr. Blanchard W., Trinity College, Hartford, Conn.
Meier, Dr. Frederick W., P.O. Box 642, Louisiana State University, University, La.
Meiklejohn, Prof. Alexander, 1525 La Loma Ave., Berkeley, Calif.
Meiklejohn, Prof. Donald.
Meland, Prof. Bernard E., Pomona College, Claremont, Calif.
Melden, Dr. A. I., University of Washington.
Melvin, Prof. Georgiana, Mills College, Oakland, Calif.
Mercier, Prof. Louis J. A., 134 Brattle St., Cambridge, Mass.
Merlan, Prof. Philip, Scripps College, Claremont, Calif.
Metzger, Dr. Arnold, 51 Martin St., Cambridge, Mass.
Meyerson, Dr. Helen C., 349 E. 49th, New York 17, N.Y.
Miller, Prof. Allen Ott, Heidelberg College, Tiffin, Ohio.
Miller, Mr. Cecil H., Kansas State College, Manhattan, Kan.
Miller, Dr. Dickinson S., 95 Pinckney St., Boston, Mass.
Miller, Prof. Hugh, University of California at Los Angeles, Los Angeles, Calif.
Miller, Prof. James W., College of William and Mary, Williamsburg, Va.
Miller, Prof. Robert H., Manchester College, North Manchester, Ind.
Minor, Prof. William S., W. Virginia University, Morgantown, W.Va.
Mitchell, Prof. E. T., University of Texas, Austin, Tex.
Mitchell, Prof. Wilfred M., Fisk University, Nashville, Tenn.
Mitrany, Prof. David, Institute for Advanced Study, Princeton, N.J.
Montague, Prof. W. P., Barnard College, Columbia University, New York City.
Moody, Dr. Ernest A., Dilley, Texas.
Moore, Prof. Charles A., University of Hawaii, Honolulu 10, Hawaii.
Moore, Pres. Dale H., Cedar Crest College, Allentown, Pa.
Moore, Dr. E. C., University of California at Los Angeles, Los Angeles, Calif.
Moore, Prof. Jared S., Western Reserve University, Cleveland, Ohio.
Moore, Prof. John M., Swarthmore College, Swarthmore, Pa.
Moore, Dr. Kate Gordon, 516 Woodruff Ave., Los Angeles, Calif.
Moore, Prof. Meritt H., Knox College, Galesburg, Ill.
Moore, Prof. Willis, University of Missouri, Columbia, Mo.
Morgan, Dr. Barbara S., 840 Park Ave., New York City.
Morgan, Prof. George Allen, Jr., Apt. 2, 1813 F St., N.W., Washington 6, D.C.
Morgan, Prof. W. J., Washburn College, Topeka, Kan.
Morgan, Pres. William S., 1683 La Loma St., Berkeley, Calif.
Morris, Prof. Bertram, Northwestern University, Evanston, Ill.
Morris, Prof. Charles W., University of Chicago, Chicago, Ill.
Morris, Prof. Frank E., Connecticut College, New London, Conn.
Morrow, Prof. Glenn R., University of Pennsylvania, Philadelphia, Pa.
Mothershead, Prof. John L., Jr., Stanford University, Palo Alto, Calif.
Muelder, Prof. Walter G., 72 Mt. Vernon St., Boston 8, Mass.
Mueller, Prof. Gustav, University of Oklahoma, Norman, Okla.
Mulherin, Father W. A., Loyola University, New Orleans, La.
Munitz, Dr. Milton K., 5022 15th Ave., Brooklyn, N.Y.
Munro, Prof. Thomas, Museum of Art, Cleveland, Ohio.
Murphy, Prof. Arthur E., Cornell University, Ithaca, N.Y.

UMI

Myers, Prof. Orvil, Los Angeles City College, Los Angeles, Calif.
Myerson, Dr. Helen C., 349 E. 49th St., New York 17, N.Y.

Nagel, Prof. Ernest, Columbia University, New York City.
Nahm, Prof. Milton C., Bryn Mawr College, Bryn Mawr, Pa.
Nason, Pres. John W., Swarthmore College, Swarthmore, Pa.
Nathanson, Mr. Jerome, 2 West 64th St., New York 23, N.Y.
Negley, Dr. Glenn R., University of Illinois, Urbana, Ill.
Nelson, Prof. Everett J., University of Washington, Seattle, Wash.
Nelson, Prof. R. W., Phillips University, Enid, Okla.
Newhall, Dr. Jeanette E., Andover Harvard Theological Library, Francis Ave., Cambridge, Mass.
Newlin, Prof. W. J. Amherst College, Amherst, Mass.
Nicholson, Prof. J. A., University of Illinois, Urbana, Ill.
Nickels, Prof. Horace J., School of Religion, Howard University, Washington, D.C.
Nicol, Prof. Carl C. W., Oberlin College, Oberlin, Ohio.
Niebuhr, Prof. H. Richard, Yale University, New Haven, Conn.
Nilson, Dr. Sven, Treeland, Huckleberry Hill Rd., Unionville, R.F.D., Conn.
Norborg, Prof. Sverre, University of Minnesota, Minneapolis, Minn.
Norris, Prof. Louis William, Baldwin-Wallace College, Berea, Ohio.
Northrop, Prof. F. S. C., Silliman College, Yale University, New Haven, Conn.
Norton, Prof. William Joseph, Jr., 206 Hale St., New Brunswick, N.J.

Oliver, Prof. Donald, University of Minnesota, Minneapolis, Minn.
O'Meara, Prof. William, 266 Bedford Park Blvd., New York, N.Y.
Organ, Prof. Troy, University of Akron, Akron, Ohio.
Osborne, Prof. C. P., University of Kansas, Lawrence, Kan.
Otto, Prof. M. C., University of Wisconsin, Madison, Wis.
Overstreet, Prof. Harry A., 120 Haven Ave., New York, N.Y.

Pape, Dr. L. M., University of Chicago, Chicago, Ill.
Parker, Prof. D. H., University of Michigan, Ann Arbor, Mich.
Parkhurst, Prof. Helen H., Barnard College, New York City.
Patrick, Prof. G. T. W., 1440 California Ave., Palo Alto, Calif.
Patterson, Prof. Charles H., University of Nebraska, Lincoln, Neb.
Patterson, Dean Herbert, Oklahoma A. & M. College, Stillwater, Okla.
Patterson, Dr. Robert Leet, 1707 Columbia Rd., Washington, D.C.
Payne, Prof. Wilfred, Municipal University of Omaha, Omaha, Neb.
Pegis, Prof. Anton C., Fordham University, New York City.
Pell, Prof. Orlie A. H., 27 E. 94th St., New York City.
Penrose, Prof. Stephen B. L., Jr., 50 W. 50th St., New York City.
Pepper, Prof. S. C., University of California, Berkeley, Calif.
Pérez-Marchand, Prof. Monelisa, University of Puerto Rico, Rio Piedras, Puerto Rico.
Perry, Prof. Charner, University of Chicago, Chicago, Ill.
Perry, Prof. Ralph B., 445 Widener Library, Cambridge 38, Mass.
Peterson, Dr. Houston, Rutgers University, New Brunswick, N.J.
Pfeiffer, Prof. Frederick L., Dept. of German, University of Minnesota, Minneapolis, Minn.
Pfuetze, Prof. Paul E., University of Connecticut, Storrs, Conn.
Phillips, Prof. Herbert J., University of Washington, Seattle, Wash.
Piatt, Prof. D. A., University of California at Los Angeles, Los Angeles, Calif.
Picard, Prof. Maurice, Dartmouth College, Hanover, N.H.
Piper, Prof. Raymond F., Syracuse University, Syracuse, N.Y.
Pollock, Prof. Robert, Fordham University, New York City.
Porteous, Prof. A. J. D., 3 Kingsmead Rd. North, Birkenhead, Cheshire, England.
Pott, Pres. W. S. A., Elmira College, Elmira, N.Y.
Powell, Prof. Elmer E., 208 E. High St., Oxford, Ohio.

Proctor, Prof. Thomas Hayes, Wellesley College, Wellesley, Mass.
Pyle, Prof. C. B., Kansas State Teachers College, Pittsburg, Kan.

Quine, Dr. Willard V., Harvard University, Cambridge, Mass.

Rader, Prof. Melvin, University of Washington, Seattle, Wash.
Ramsdell, Prof. Edward T., Vanderbilt University School of Religion, Nashville, Tenn.
Ramsden, Dr. Raymond, State Teachers College, Oshkosh, Wis.
Ramsperger, Prof. A. G., University of Wisconsin, Madison, Wis.
Randall, Prof. J. H., Jr., Columbia University, New York City.
Rathbun, Miss Constance, 15 Beaton St., Wellesley, Mass.
Ratner, Dr. Joseph, 468 Riverside Dr., New York City.
Raup, Prof. R. Bruce, Teachers College, Columbia University, New York City.
Regester, Prof. J. D., College of Puget Sound, Tacoma, Wash.
Reichenbach, Prof. Hans, University of California at Los Angeles, Los Angeles, Calif.
Reid, Prof. John R., Stanford University, Calif.
Reinhardt, Prof. Kurt F., Stanford University, Palo Alto, Calif.
Rein'l, Dr. L. C., University of Missouri, Columbia, Mo.
Reis, Prof. Lincoln, Bard College, Annandale-on-Hudson, N.Y.
Reiser, Prof. Oliver L., University of Pittsburgh, Pittsburgh, Pa.
Reither, Prof. W. H., Ohio State University, Columbus, Ohio.
Remsberg, Prof. Robert G., Wittenberg College, Springfield, Ohio.
Reynolds, Prof. Paul A., Maple Shade Rd., Middletown, Conn.
Rice, Prof. Philip B., Kenyon College, Gambier, Ohio.
Rich, Dr. Gertrude V. B., Barnard College, New York City.
Richter, Prof. Werner, 177 Virginia St., Elmhurst, Ill.
Riesen, Prof. E. R., University of Arizona, Tucson, Ariz.
Rieser, Dr. Max, 519 W. 121st St., New York City.
Riezler, Dr. Kurt, 270 Riverside Dr., New York City.
Rist, Prof. Martin, The Iliff School of Theology, Denver, Colo.
Roback, Dr. A. A., 8 Prescott St., Cambridge, Mass.
Robbins, Mr. Reginald C., 390 Picacho Lane, Santa Barbara, Calif.
Roberts, Prof. David E., Union Theological Seminary, Broadway at 120th St., New York City.
Roberts, Prof. W. H., 57 Bradley Point, West Haven, Conn.
Robins, Prof. Sidney S., 414 N. Pleasant St., Amherst, Mass.,
Robinson, Prof. Daniel S., University of Southern California, Los Angeles 7, Calif.
Robinson, Prof. E. A., San Jose State College, San Jose, Calif.
Robinson, Prof. Edward S., Oklahoma A. & M. College, Stillwater, Okla.
Robson, Prof. J. W., University of California at Los Angeles, Calif.
Roelofs, Prof. Howard D., University of Cincinnati, Cincinnati, Ohio.
Rohrbaugh, Prof. L. G., Dickinson College, Carlisle, Pa.
Rolbiecki, Prof. John J., Catholic University, Washington, D.C.
Romanell, Prof. P., Wells College, Aurora-on-Cayuga, N.Y.
Rome, Dr. Sydney, New School for Social Research, 66 W. 12th St., New York 11, N.Y.
Rose, Dr. Grace L., Wheaton College, Norton, Mass.
Rosenstock-Huessy, Prof. Eugen, Dartmouth College, Hanover, N.H.
Rosinger, Dr. Kurt Edward.
Ross, Prof. Floyd H., University of Southern California, Los Angeles, Calif.
Ross, Dr. Ralph Gilbert, Division of General Education, New York University, New York, N.Y.
Roth, Prof. Joseph M., College of Mines and Metallurgy, El Paso, Tex.
Rougier, Prof. Louis, 270 Riverside Dr., New York City.
Ruby, Dr. Lionel, Indiana University, Calumet Center, East Chicago, Ind.
Ruddick, Dr. C. T., 115 Simpson Rd., Ardmore, Pa.
Ruja, Dr. Harry, Compton Junior College, Compton, Calif.

Ryan, Most Reverend James H., 2507 Cass St., Omaha, Neb.
Rynin, Dr. David, University of California, Berkeley, Calif.

Sabine, Prof. George H., Cornell University, Ithaca, N.Y.
Sabin-Smith, Prof. Ethel, Mills College, Oakland, Calif.
Sait, Prof. Una B., Claremont College, Claremont, Calif.
Sampson, Prof. Floyd Luman, University of Denver, Denver, Colo.
Sanborn, Prof. Herbert C., "Isartal," Brentwood, Tenn.
Sander, Prof. Herman J., 768 Madison Ave., New York City 21.
Savery, Dr. Barnett, University of Idaho, Moscow, Idaho.
Savides, Prof. A. P., 182 Allerton Rd., Newton Highlands, Mass.
Scharfstein, Dr. Ben-Ami, 310 W. 105th St., New York 25, N.Y.
Schaub, Prof. E. L., Northwestern University, Evanston, Ill
Schermerhorn, Prof. R. A., Almsted Falls, Ohio.
Schilpp, Prof. P. A., Northwestern University, Evanston, Ill.
Schipper, Mrs. Edith, Escola Técnica de Aviacãs, Rua Visconde de Parmiabã 1316, São Paulo, Brásil.
Schipper, Dr. Gerrit J., Escola Técnica de Aviacãs, Rua Visconde de Parmiabã 1316, São Paulo, Brásil.
Schmidt, Prof. Karl, Carleton College, Northfield, Minn.
Schneider, Prof. Herbert W., Columbia University, New York City.
Schrecker, Prof. Paul, New School for Social Research, 66 W. 12th St., New York City.
Schrickel, Prof. Harry G., Carnegie Institute of Technology, Pittsburgh, Pa.
Schuetz, Dr. Alfred, 25 W. 81st St., New York City.
Schuhmann, Dr. Alfred, 1834 W. 41 Place, Los Angeles 37, Calif.
Scoon, Prof. Robert M., Princeton University, Princeton, N.J.
Scott-Craig, Prof. Thomas S. K., Dartmouth College, Hanover, N.H.
Scudder, Prof. Delton Lewis.
Searles, Prof. H. L., University of Southern California, Los Angeles, Calif.
Sears, Prof. Lawrence, Mills College, Oakland, Calif.
Seelye, Prof. Laurens Hickok, Robert College, Istanbul, Turkey.
Sellars, Prof. R. W., University of Michigan, Ann Arbor, Mich.
Sellars, Prof. Wilfrid Stalker, State University of Iowa, Iowa City, Iowa.
Sellen, Prof. Arthur G., Washburn College, Topeka, Kan.
Selsam, Dr. Howard, Jefferson School of Social Science, 575 Sixth Ave., New York City.
Shafer, Prof. Robert, Graduate School, University of Cincinnati, Cincinnati, Ohio.
Sharrard, Prof. J. A., University of Saskatchewan, Saskatoon, Sask.
Shaw, Prof. C. G., New York University, Washington Square, New York City.
Shaw, Dr. Mary, University of Minnesota, Minneapolis, Minn.
Shearer, Prof. Edna A., Smith College, Northampton, Mass.
Sheffer, Prof. H. M., Emerson Hall, Harvard University, Cambridge 38, Mass.
Sheldon, Prof. W. H., 169 Bishop St., New Haven, Conn.
Sheriff, Prof. Wilbur S., 210 Vine St., Johnstown, Pa.
Sherman, Prof. C. L., Willamette University, Salem, Ore.
Shimer, Pres. Wm. A., Marietta College, Marietta, Ohio.
Shirk, Miss Evelyn Urban, Brooklyn College, Brooklyn, N.Y.
Shute, Prof. Clarence, c/o Miss Zelma Shute, Y.W.C.A., Jamestown, N.Y.
Sibley, Dr. William M., Queens University, Kingston, Ontario.
Simkovitch, Prof. Vladimir, Columbia University, New York City.
Singer, Prof. Edgar A., University of Pennsylvania, Philadelphia, Pa.
Singer, Dr. Milton B., University of Chicago, Chicago, Ill.
Sisson, Prof. E. O., P.O. Box 1774, Carmel, Calif.
Sloane, Prof. Eugene H., Connecticut State Teachers College, Willimantic, Conn.
Slonimsky, Dr. Henry, 40 W. 68th St., New York City.
Smart, Prof. Harold R., Cornell University, Ithaca, N.Y.
Smith, Dr. H. Jeffery, Stanford University, Palo Alto, Calif.
Smith, Prof. Ignatius, Catholic University, Washington, D.C.
Smith, Prof. T. V., University of Chicago, Chicago, Ill.

Snow, Dr. Adolph J., 1320 Ashland Ave., Wilmette, Ill.
Solmsen, Prof. Friedrich, Cornell University, Ithaca, N.Y.
Somerville, Dr. John, Hunter College, New York City.
Soto, Dr. Juan B., Chancellor of the University of Puerto Rico, University of Puerto Rico, Rio Piedras, P.R.
Speight, Dean H. E. B., 205 Tower Road, Ithaca, N.Y.
Spencer, Prof. Margaret N., Miami University, Oxford, Ohio.
Spencer, Prof. W. Wylie, Miami University, Oxford, Ohio.
Spiegelberg, Dr. Frederic, 135 Harriet Ave., Palo Alto, Calif.
Spiegelberg, Dr. Herbert, Lawrence College, Appleton, Wis.
Sprague, Prof. Paul W., Wheaton College, Norton, Mass.
Stace, Prof. Walter T., Princeton University, Princeton, N.J.
Stalknecht, Prof. Newton P., Bowdoin, Brunswick, Me.
Stalnaker, Dean Luther W., Drake University, Des Moines, Iowa.
Starbuck, Prof. E. D., University of Southern California, Los Angeles, Calif.
Stearns, Prof. Isabel, Bryn Mawr College, Bryn Mawr, Pa.
Steere, Prof. Douglas V., Haverford College, Haverford, Pa.
Stephens, Prof. I. K., Southern Methodist University, Dallas, Tex.
Stephens, Prof. Robert G., Indiana University, Bloomington, Ind.
Stevenson, Prof. Charles L., University of Michigan, Ann Arbor, Mich.
Stewart, Prof. Malcolm F., Illinois College, Jacksonville, Ill.
Stine, Prof. Russell W., Muhlenberg College, Allentown, Pa.
Stokes, Dr. Ella H., William Penn College, Oskaloosa, Iowa.
Stokes, Prof. Mack B., Candler School of Theology, Emory University, Atlanta, Ga.
Stone, Prof. Wendell C., Rollins College, Winter Park, Fla.
Stoops, Prof. J. D., Grinnell College, Grinnell, Iowa.
Storer, Dr. Morris B., 3712 Fordham Rd., Washington, D.C.
Storrs, Dr. Margaret, 66 Massasoit St., Northampton, Mass.
Strong, Prof. E. W., University of California, Berkeley, Calif.
Stuart, Prof. H. W., P.O. Box 1943, Carmel, Calif.
Stuurman, Pfc. Douwe, 39-338-866, Hdg. Co. 2d Br., 254th Infantry, A.P.O. 410, Camp Van Dorn, Miss.
Sullivan, Prof. C. J., University of Oregon, Eugene, Ore.
Swabey, Prof. Marie Collins, New York University, Washington Square, New York City.
Swabey, Prof. W. Curtis, New York University, University Heights, New York City.
Swift, Prof. R. F.

Taeusch, Dr. C. F., 4932 S. Bldg., U. S. Dept. of Agriculture, Washington, D.C.
Talbert, Prof. Ernest L., University of Cincinnati, Cincinnati, Ohio.
Talbot, Prof. Ellen B., Mt. Holyoke College, South Hadley, Mass.
Tawney, Prof. Guy A., University of Illinois, Urbana, Ill.
Taylor, Pres. Harold, Sarah Lawrence College, Bronxville, N.Y.
Taylor, Prof. W. S., Pierce Hall, Northampton, Mass.
ten Hoor, Dean Marten, 4 Forest Lake Dr., Tuscaloosa, Ala.
Tenney, Prof. Charles D., Southern Illinois Normal University, Carbondale, Ill.
Tenney, Prof. E. V., Fresno State College, Fresno, Calif.
Thalheimer, Dr. Ross, Birmingham Hospital, Van Nuys, Calif.
Thomas, Dr. Francis A., Wilberforce University, Wilberforce, Ohio.
Thomas, Prof. George F., Princeton University, Princeton, N.J.
Thomson, Prof. Golden O., Western Union College, LeMars, Iowa.
Thompson, Prof. Hugo W., 1165 Lincoln Ave., St. Paul, Minn.
Thompson, Prof. R. C., University of Nevada, Reno, Nev.
Thompson, Prof. Samuel, Monmouth College, Monmouth, Ill.
Thompson, Prof. M. K., 11 S. Summit St., Ypsilanti, Mich.
Thorndike, Prof. E. L., Columbia University, New York City.
Tilley, Prof. Ethel, Sullins College, Bristol, Va.
Tillich, Prof. Paul, Union Theological Seminary, New York, N.Y.

Titus, Prof. Harold H., Denison University, Granville, Ohio.
Toll, Prof. C. H., Amherst College, Amherst, Mass.
Tonness, Dr. Alfred, 1725 C St., Pullman, Wash.
Tornay, Dr. Stephen, 1846 W. 41st St., Los Angeles 37, Calif.
Tower, Prof. C. V., Ursinus College, Collegeville, Pa.
Townsend, Prof. H. G., University of Oregon, Eugene, Ore.
Trap, Prof. William M., Wayne University, Detroit, Mich.
Trivers, Dr. Howard, Division of Central European Affairs, Department of State, Washington, D.C.
Trueblood, Prof. D. Elton, Earlham College, Richmond, Ind.
Tsanoff, Prof. R. A., The Rice Institute, Houston, Tex.
Tufts, Dr. Matilde Castro, 1600 State St., Santa Barbara, Calif.
Turner, Prof. John Pickett, Brooklyn College, Brooklyn, N.Y.
Turquette, Dr. Atwell R., University of Illinois, Urbana, Ill.
Tuttle, Prof. John R., Elmira College, Elmira, N.Y.
Tuttle, Prof. Tom Hollingsworth, P. O. Drawer 153, Mount Carroll, Ill.

Urban, Prof. Wilbur M., Yale University, New Haven, Conn.
Ushenko, Prof. A. P., Princeton University, Princeton, N.J.

Vander Lugt, Pres. G. T., Carroll College, Waukesha, Wis.
Vander Lugt, William, Central College, Pella, Iowa.
Van Riper, Dr. Benjamin W., The Republic Building, 209 South State St., Chicago, Ill.
Van Saun, Prof. Walter, Hope College, Holland, Mich.
Veatch, Dr. H., Indiana University, Bloomington, Ind.
Venable, Prof. Vernon, Vassar College, Poughkeepsie, N.Y.
Vibbert, Prof. Charles B., 1710 Hermitage Rd., Ann Arbor, Mich.
Virtue, Prof. Charles F., University of Louisville, Louisville, Ky.
Vivas, Prof. Eliseo, University of Chicago, Chicago, Ill.
Vlastos, Prof. Gregory, Queen's University, Kingston, Ont., Can.

Wahl, Prof. Jean, Faculté des Lettres, Sorbonne, University of Paris, Paris, France.
Walcott, Prof. G. D., Long Island University, Brooklyn, N.Y.
Walker, Prof. Edwin R., University of Colorado, Boulder, Colo.
Wallraff, Dr. Charles Frederic, Univ. of Arizona, Tuscon, Ariz.
Walsh, Prof. Dorothy, Smith College, Northampton, Mass.
Warbeke, Prof. John M., Mt. Holyoke College, South Hadley, Mass.
Ward, Dr. F. Champion, 5302 Blackstone Ave., Chicago 15, Ill.
Ward, Prof. Leo R., Notre Dame University, Notre Dame, Ind.
Ward, Prof. Paul W., Syracuse University, Syracuse, N.Y.
Warren, Dr. Roland L., Alfred University, Alfred, N.Y.
Warren, Dean William M., Boston University, Boston, Mass.
Warren, Prof. W. P., Bucknell University, Lewisburg, Va.
Waters, Prof. Bruce, Ohio State University, Columbus, Ohio.
Watson, Prof. A. C., Marietta College, Marietta, Ohio.
Watson, Dr. Sarah M., Packer Collegiate Institute, Brooklyn, N.Y.
Weber, Dr. Alden O., 252 First St., Osawatomie, Kan.
Weedon, Dr. William Stone, University P.O. Box 1746, Charlottesville, Va.
Weinberg, Dr. Carlton B., 515 W. 110th St., New York, N.Y.
Weinberg, Dr. Julius, University of Cincinnati, Cincinnati, Ohio.
Weinreich, Dr. Marcel, University of Puerto Rico, Rio Piedras, Puerto Rico.
Weiss, Dr. Charles, 325 Bushwick Ave., Brooklyn, N.Y.
Weiss, Prof. Paul, Yale Univ., New Haven, Conn.
Weitz, Prof. Morris, Vassar College, Poughkeepsie, N.Y.
Welch, Dr. Livingston, Hunter College, 2 Park Ave., New York City.
Weld, Dr. Hiram C., Elm Park Church, Scranton 10, Pa.
Wellmuth, Prof. John J., S.J., Loyola University, Chicago, Ill.
Wells, Prof. John M., Hillsdale College, Hillsdale, Mich.

Wells, Dr. Rulon, Yale University, New Haven, Conn.
Wells, Prof. Wesley R., Syracuse University, Syracuse, N.Y.
Wendel, Prof. Hugo C. M., Long Island University, Brooklyn, N.Y.
Wenrick, Prof. John E., Otterbein College, Westerville, Ohio.
Werkmeister, Prof. W. H., University of Nebraska, Lincoln, Neb.
Wertheimer, Prof. Max.
Weyer, Dean Edward M., Washington and Jefferson College, Washington, Pa.
Whallon, Dr. Robert E., 134 Main St., Concord, Mass.
Wheelwright, Prof. Philip E., Dartmouth College, Hanover, N.H.
Whitchurch, Dean Irl Goldwin, Grad. School of Religion, UCLA, Los Angeles, Calif.
White, Dr. Morton G., Univ. of Pennsylvania, Philadelphia, Pa.
White, Prof. Stephen S., 4941 Tracy Ave., Kansas City 4, Mo.
Whitehead, Prof. Alfred N., Harvard University, Cambridge, Mass.
Wick, Prof. Warner Arms, Falcon Bronze Co., 218 S. Phelps St., Youngstown, Ohio.
Widgery, Prof. Alban G., Duke University, Durham, N.C.
Wiederhold, Dr. Albert George, 609 Imperial Blvd., Reno, Nev.
Wieman, Prof. Henry N., University of Chicago, Chicago, Ill.
Wiener, Prof. Philip P., College of City of New York, New York City.
Wiggins, Dr. Forest Oran, Louisville Municipal College, Louisville, Ky.
Wild, Prof. John, Harvard University, Cambridge, Mass.
Will, Prof. Frederick L., University of Illinois, Urbana, Ill.
Williams, Prof. D. C., Harvard University, Cambridge, Mass.
Williams, Prof. Daniel D., Chicago Theological Seminary, Chicago, Ill.
Williams, Prof. Gardner, University of Toledo, Toledo, Ohio.
Williams, Prof. Milton, Syracuse University, Syracuse 10, N.Y.
Williams, Prof. S. P., Lake Forest University, Lake Forest, Ill.
Williamson, Prof. Mary, Hollins College, Hollins, Va.
Wilson, Dr. H. Van Rensselar, 2711 Ave. K, Brooklyn, N.Y.
Wilson, Dr. Mabel Virginia, 205 Cayuga Heights Rd., Ithaca, N.Y.
Winn, Dr. Ralph B., 607 W. 145th St., New York City.
Wolfson, Prof. Harry A., Harvard University, Cambridge, Mass.
Wood, Prof. Ledger, Princeton University, Princeton, N.J.
Woods, Mrs. James K., 29 Follen St., Cambridge, Mass.
Wright, Prof. H. W., University of Manitoba, Winnipeg, Man., Can.
Wright, Prof. William K., Dartmouth College, Hanover, N.H.

Zerby, Dr. Lewis, State University of Iowa, Iowa City, Iowa.
Zilsel, Dr. Edgar, 49 W. 75th St., New York City.
Zink, Dr. Sidney, 6125 S. Kenwood Ave., Chicago, Ill.

ASSOCIATE MEMBERS

Adlerblum, Mrs. Nima H., Box 253, General Postoffice, New York City.
Babcock, Mr. Donald C., Durham, N.H.
Benson, Mr. Arthur Jerome, 190 West Milton Ave., Rahway, N.J.
Bradley, Mr. J. H., 619 Sarbonne Rd., Bel-Air, Los Angeles, Calif.
Cleve, Dr. Felix, 634 Columbus Ave., New York City.
Cooley, Mr. Alan Ashton, 180 Appleton Ave., Pittsfield, Mass.
Copp, Prof. Marie, Wilson College, Chambersburg, Pa.
Douglass, Pres. Paul F., American University, Washington, D.C.
Dowdell, Dr. Victor L., Albion, Mich.
Emory, Miss Mildred, Alabama Polytechnic Institute, Auburn, Ala.
Erdos, Dr. Leslie, 570 W. 156th St., New York 32, N.Y.
Forkosch, Dr. Morris D., 200 Fifth Ave., New York, N.Y.
Forrester, Prof. James, Brandon College, Brandon, Manitoba, Can.
Frank, Dr. Solomon, 911 Garfield St., Winnipeg, Manitoba, Can.
Fritz, Mr. Charles A., Jr., 78-10 34th Ave., Jackson Heights, N.Y.
Gilbert, Dr. Albin, 808 West End Ave., Apt. 3B, New York, N.Y.

Goldenson, Dr. Robert, 545 W. 239th St., Riverdale, N.Y.
Goldschmied, Dr. Albin, Middlesex University, Waltham, Miss.
Goldshur, Dr. David, 498 Vernon St., San Francisco 12, Calif.
Hattersley, Mr. L. W., Pasadena Junior College, Pasadena, Calif.
Hill, Prof. Thomas English, 20 Mansfield St., East Lynn, Mass.
Hinshaw, Mr. Virgil G., Jr.
Hughes, Dr. W. Hardin, Pasadena Junior College, Pasadena, Calif.
Jackson, Dr. Joseph H., Worthington Ridge, Berlin, Conn.
Kamiat, Mr. Arnold H., Hotel Martinique, New York City.
Karlin, Mr. Eli, 60 College Street, New Haven, Conn.
Lazar, Dr. Nathan, 2776 Webb Ave., New York, N.Y.
Leavens, Dr. R. F., 1900 Yosemite Rd., Berkeley, Calif.
McConnell, Bishop Francis J., 150 Fifth Ave., New York City.
McLaren, Mr. Myron, 545 West 148th St., New York 31, N.Y.
Mason, Dr. Gabriel R., Abraham Lincoln High School, Brooklyn, N.Y.
Mattern, Dr. Charles D., Ursinus College, Collegeville, Pa.
Miller, Mr. Taylor Edward, Syracuse University, Syracuse, N.Y.
Owen, Prof. David, United Colleges, Winnipeg, Manitoba, Can.
Pettegrove, Mr. James P., 140 McCash Rd., Upper Montclair, N.J.
Piest, Mr. Oskar, 121 W. 72nd St., New York, N.Y.
Reidenbach, Rev. Clarence, First Congregational Church, Oakland, Calif.
Rosenbaum, Mr. Ira, 47 Plaza St., Brooklyn, N.Y.
Rosenfield, Dr. Leonora Cohen, 3600 38th, N.W., Washington 16, D.C.
Schneider, Dr. Edward, 3910 Fulton St., San Francisco, Calif.
Shuder, Mr. H. A., Baxter General Hospital, Spokane, Wash.
Simpson, Dr. Kenneth, 2128 Derby St., Berkeley, Calif.
Skulsky, Mr. Samuel, 415 Lefferts Ave., Brooklyn, N.Y.
Smith, Mr. John E., Vassar College, Poughkeepsie, N.Y.
Stowater, Mr. S. Arthur.
Thalheimer, Mr. A., Roxbury Pl., Mt. Washington, Baltimore, Md.
Urban, Prof. Percy L., Berkeley Divinity School, New Haven, Conn.
Weinberg, Miss Yehuda L., American Preparatory School, 1214 Spruce St, Philadelphia, Pa.
Whitman, Miss Mary, Vassar College, Poughkeepsie, N.Y.
Wilson, Dr. David H., "Brickends," Alfred, Me.
Wohlstetter, Albert, 308 W. 106th St., New York City.